

## R854 WNL (CRI90 1400mA 40D)

Luminaire Name: R854 WNL (CRI90 1400mA 40D)

Report NO.: 01313217031110A

Test NO.:

Lamp: CITIZEN CLU038-1208C4-403H5M3 1400mA

Sum Lumens: 5633.9 lm

Number of Lamps: 1

Diameter: 140mm

Length: -140mm

Photometric Type: Type C

Voltage: 230.39 V

Current: 0.2435 A

Power: 54.363 W

Power Factor: 0.969

Ballast Type: HEP LTC60W1400-1CZ UNI

Width: -140mm

Height: 100mm

Optical Component: 40D Reflector DC(V:37.37V I:1.369A P:51.16W)

## Photometric Results

Lumens: 4895.09 lm

Efficiency: 86.89%

Central Intensity: 8594.405cd

Maximum Intensity: 9266.941cd

Beam Angle(10%): Left: -27.8 Right:40.6

Maximum s/h: C0\_180: 0.37 C90\_270: 0.37

Effective Luminous Flux: 4595.17 lm

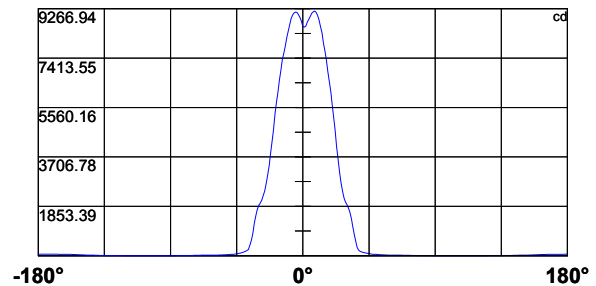
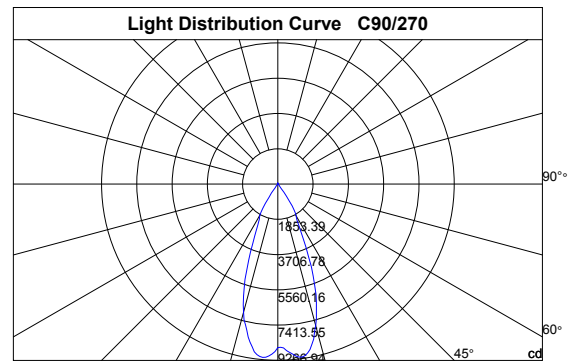
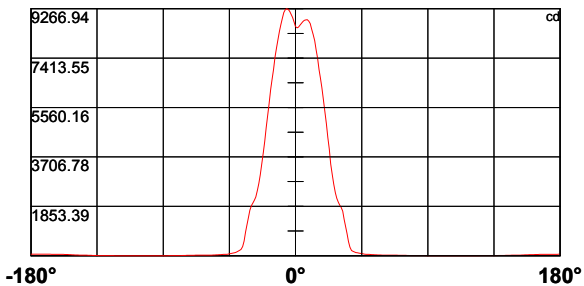
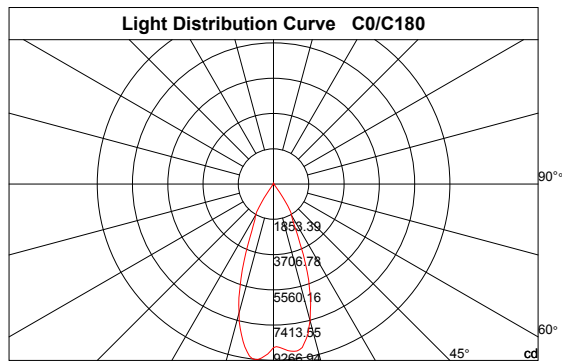
Angle of maximum intensity: C:180.0 G:6.0

Half Peak Side Angle(50%): Left: -14.3 Right:27.6

Up Flux Rate: 0.92%

Down Flux Rate: 85.96%

CIE Classification: Direct



**R854 WNL (CRI90 1400mA 40D)****Intensity Data [cd]****Page2**

C\γ	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	8594.4	8548.3	8579.4	8648.4	8715.3	8779.2	8828.2	8851.2	8855.5	8802.2
30.0	8594.4	8527.5	8525.8	8598.2	8683.8	8772.8	8854.2	8900.6	8912.5	8879.7
60.0	8594.4	8534.3	8534.7	8621.6	8720.9	8826.5	8944.9	8999.0	9016.9	8978.1
90.0	8594.4	8573.5	8613.1	8766.0	8865.3	8970.5	9086.8	9152.8	9176.6	9129.8
120.0	8594.4	8569.6	8720.9	8835.4	8933.8	9077.0	9152.8	9191.5	9161.7	9068.4
150.0	8594.4	8702.1	8854.6	8982.8	9101.2	9189.8	9253.3	9264.4	9197.9	9071.4
180.0	8594.4	8772.0	8934.3	9050.5	9163.4	9237.5	9266.9	9227.8	9125.9	8913.0
210.0	8594.4	8806.9	8973.9	9081.2	9140.4	9174.1	9160.0	9083.3	8937.7	8782.6
240.0	8594.4	8801.4	8958.1	9075.7	9122.5	9133.6	9106.4	8993.9	8844.8	8598.2
270.0	8594.4	8807.3	8933.8	9042.0	9124.2	9139.6	9105.9	9029.7	8895.1	8659.1
300.0	8594.4	8660.8	8772.0	8852.5	8937.7	8952.6	8915.9	8851.2	8759.6	8619.9
330.0	8594.4	8605.8	8687.2	8749.8	8808.2	8840.5	8832.9	8815.4	8754.9	8650.1
360.0	8594.4	8548.3	8579.4	8648.4	8715.3	8779.2	8828.2	8851.2	8855.5	8802.2

C\γ	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
0.0	8710.2	8500.6	8305.5	8063.6	7718.1	7415.7	6988.9	6655.3	6295.8	5821.7
30.0	8806.0	8680.8	8412.4	8157.3	7841.2	7537.1	7240.2	6806.1	6433.0	6087.9
60.0	8885.3	8696.1	8479.8	8248.5	7892.8	7599.7	7319.0	6957.3	6600.0	6195.7
90.0	9020.3	8855.5	8609.7	8360.9	7969.4	7689.2	7359.5	6917.3	6551.8	6151.8
120.0	8902.3	8698.7	8470.0	8130.5	7845.5	7474.5	7142.2	6802.3	6369.9	5953.3
150.0	8810.7	8624.2	8375.4	7995.0	7693.8	7303.7	6958.6	6589.3	6046.2	5615.5
180.0	8680.8	8423.1	8088.7	7778.2	7448.9	6995.3	6628.9	6241.3	5690.9	5253.0
210.0	8446.5	8179.9	7890.6	7548.6	7240.6	6791.2	6476.0	6077.7	5521.0	5087.3
240.0	8352.4	8090.4	7778.6	7501.7	7210.8	6788.2	6436.4	6057.7	5574.6	5143.1
270.0	8427.8	8187.1	7843.4	7582.7	7353.9	6949.7	6599.5	6153.1	5739.5	5305.4
300.0	8389.9	8192.2	7965.2	7679.8	7425.9	7094.1	6780.6	6430.0	5909.5	5489.9
330.0	8481.0	8302.5	8096.4	7836.1	7575.0	7309.6	6908.4	6577.8	6216.6	5747.6
360.0	8710.2	8500.6	8305.5	8063.6	7718.1	7415.7	6988.9	6655.3	6295.8	5821.7

C\γ	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
0.0	5383.0	4953.2	4438.6	4005.4	3435.4	3032.9	2680.6	2364.1	2152.8	2013.1
30.0	5491.6	5027.3	4486.3	4036.9	3600.3	3038.4	2669.1	2379.0	2132.0	2004.2
60.0	5662.8	5181.9	4535.7	4073.5	3628.0	3113.4	2715.1	2402.9	2129.4	2022.9
90.0	5646.2	5175.9	4699.7	4085.5	3635.2	3123.2	2725.8	2401.2	2148.6	2008.9
120.0	5514.2	4892.2	4423.7	3967.9	3455.0	3036.3	2677.2	2342.0	2161.4	2033.1
150.0	5163.6	4622.6	4171.9	3745.5	3266.3	2897.0	2495.7	2278.5	2124.7	1991.0
180.0	4808.8	4295.0	3872.9	3470.4	3036.7	2710.9	2449.3	2202.3	2080.4	1982.0
210.0	4654.1	4157.9	3748.9	3360.9	2887.6	2639.7	2322.8	2165.6	2057.4	1950.5
240.0	4633.3	4202.2	3783.5	3258.7	2908.5	2606.9	2336.0	2163.5	2049.8	1946.2
270.0	4725.3	4286.5	3855.9	3377.1	3011.6	2700.6	2428.4	2238.9	2073.6	1974.8
300.0	5062.2	4562.1	4140.0	3723.0	3268.9	2917.0	2550.7	2336.0	2165.6	2020.4
330.0	5307.6	4884.2	4310.4	3961.1	3403.9	3021.8	2698.9	2411.8	2209.1	2026.8
360.0	5383.0	4953.2	4438.6	4005.4	3435.4	3032.9	2680.6	2364.1	2152.8	2013.1

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**Intensity Data [cd]**

C\γ	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0
0.0	1898.1	1813.3	1671.5	1360.1	1096.4	831.1	535.9	325.9	192.1	162.3
30.0	1906.2	1815.9	1666.8	1449.1	1099.8	834.0	540.6	335.7	208.3	167.0
60.0	1922.0	1813.8	1655.7	1425.7	1119.9	853.2	521.0	317.8	206.2	168.3
90.0	1907.9	1789.5	1613.6	1378.0	1061.1	786.3	531.6	296.9	199.4	160.6
120.0	1902.8	1760.5	1505.8	1232.8	935.0	572.5	392.7	251.7	193.0	161.9
150.0	1893.9	1738.8	1510.9	1146.3	861.7	557.6	357.4	242.4	193.8	169.5
180.0	1878.9	1710.3	1429.1	1156.9	884.3	546.9	345.5	237.7	198.1	168.7
210.0	1860.6	1691.1	1373.3	1099.4	783.8	540.1	345.5	219.4	189.6	162.3
240.0	1861.9	1642.5	1399.3	1130.1	813.6	563.1	353.6	204.9	182.3	155.9
270.0	1889.2	1719.6	1485.4	1214.9	840.9	583.6	401.7	226.6	192.1	165.3
300.0	1925.0	1835.5	1643.0	1403.1	1020.2	731.4	506.1	275.6	198.5	172.9
330.0	1921.5	1822.7	1623.8	1382.3	1107.1	778.7	521.8	322.5	192.1	167.4
360.0	1898.1	1813.3	1671.5	1360.1	1096.4	831.1	535.9	325.9	192.1	162.3

C\γ	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0
0.0	139.3	117.6	106.1	96.7	87.3	78.4	66.5	58.8	54.5	49.4
30.0	142.7	125.7	107.3	97.1	88.2	78.0	69.4	58.8	54.5	50.7
60.0	142.3	125.7	108.2	98.0	89.0	77.5	69.4	60.1	54.9	50.7
90.0	138.4	123.1	106.1	97.1	88.2	78.0	69.9	59.6	54.5	50.3
120.0	140.1	116.3	106.5	96.3	85.2	75.4	65.6	58.4	53.7	49.4
150.0	147.8	120.5	105.6	95.0	83.5	73.7	62.6	57.1	53.2	47.7
180.0	142.7	117.6	104.4	93.3	79.7	69.9	60.5	55.4	51.1	46.0
210.0	137.6	112.9	101.0	88.6	78.0	68.2	59.2	54.1	49.8	45.2
240.0	129.5	112.9	101.8	89.5	78.8	66.0	58.8	53.7	49.4	46.0
270.0	141.0	123.5	102.2	91.2	80.9	68.6	60.9	55.4	50.3	46.4
300.0	146.5	132.9	107.3	97.1	87.7	78.0	66.0	58.8	53.7	49.4
330.0	144.4	126.1	109.9	98.4	88.6	79.7	67.7	60.1	54.9	50.3
360.0	139.3	117.6	106.1	96.7	87.3	78.4	66.5	58.8	54.5	49.4

C\γ	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
0.0	46.0	42.6	39.6	36.6	34.5	31.5	29.4	27.3	26.0	24.7
30.0	46.0	42.6	39.6	36.6	34.1	31.9	29.4	27.3	25.6	24.3
60.0	46.9	43.4	39.2	36.6	34.1	31.9	29.4	27.7	25.6	24.3
90.0	46.4	42.6	40.0	36.2	34.1	31.5	28.5	26.8	25.1	23.4
120.0	44.7	41.3	38.3	34.9	32.8	29.8	28.1	26.0	24.3	23.0
150.0	44.3	40.9	37.5	34.9	32.4	29.4	27.3	25.6	23.9	23.0
180.0	42.6	39.2	36.2	34.1	31.1	29.0	27.3	25.6	24.3	23.4
210.0	42.2	38.3	35.8	33.7	30.7	29.0	27.3	25.6	24.3	23.4
240.0	42.6	39.2	36.6	33.2	31.1	29.4	27.3	26.0	24.7	23.4
270.0	43.4	39.6	36.6	34.1	31.5	29.4	27.7	26.0	25.1	23.4
300.0	46.0	41.3	39.2	35.4	33.2	31.1	28.5	26.8	25.6	24.3
330.0	46.4	42.2	39.6	36.6	33.7	31.5	29.4	27.3	26.0	24.7
360.0	46.0	42.6	39.6	36.6	34.5	31.5	29.4	27.3	26.0	24.7

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### Intensity Data [cd]

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C\γ	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0
0.0	23.4	22.6	21.7	20.4	20.4	20.0	18.7	18.3	17.0	16.2
30.0	23.0	22.2	21.3	20.4	20.0	19.6	19.2	17.9	17.0	15.8
60.0	22.6	21.7	20.9	20.4	20.0	19.6	18.3	17.5	16.6	15.3
90.0	22.2	20.9	20.4	20.0	19.6	19.2	17.9	17.0	15.8	14.9
120.0	21.7	20.9	20.4	19.6	19.6	18.7	17.5	16.6	15.8	14.5
150.0	21.7	20.9	20.4	20.0	19.6	18.7	17.9	16.6	15.8	14.9
180.0	21.7	21.3	20.4	20.4	20.0	19.2	18.3	17.5	16.2	15.8
210.0	22.6	21.7	21.3	20.4	20.4	19.6	18.7	17.9	17.0	16.2
240.0	23.0	22.2	21.3	20.9	20.4	20.0	19.2	18.3	17.5	16.6
270.0	22.6	21.7	21.3	20.9	20.4	20.0	19.2	17.9	17.5	16.2
300.0	22.6	22.2	21.3	20.4	20.4	20.0	18.7	18.3	17.0	16.2
330.0	23.0	22.6	21.3	20.9	20.4	20.0	19.2	18.3	17.0	16.2
360.0	23.4	22.6	21.7	20.4	20.4	20.0	18.7	18.3	17.0	16.2

C\γ	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0
0.0	15.3	14.5	13.6	13.2	12.4	11.5	10.2	8.1	5.5	2.6
30.0	14.9	14.5	13.2	12.8	11.9	11.1	10.2	8.5	6.0	3.4
60.0	14.5	13.6	12.8	12.4	11.5	10.6	9.4	8.5	5.5	3.4
90.0	13.6	13.2	12.4	11.5	10.6	10.2	8.9	7.7	5.1	3.0
120.0	14.1	13.2	11.9	11.5	10.2	9.4	8.1	5.5	3.8	2.6
150.0	14.1	13.2	12.4	11.9	10.6	9.8	7.7	5.5	3.4	2.6
180.0	14.9	13.6	13.2	12.4	11.9	10.6	8.1	6.0	3.0	2.1
210.0	15.3	14.5	14.1	13.2	12.4	11.1	8.1	5.5	3.0	2.1
240.0	15.8	14.9	14.1	13.2	12.4	11.1	8.5	6.0	3.0	2.1
270.0	15.8	14.9	14.1	13.2	12.4	10.6	8.1	5.5	2.6	2.1
300.0	15.8	14.5	14.1	13.2	12.4	11.1	9.8	6.8	4.7	2.6
330.0	15.3	14.9	14.1	13.2	12.4	11.5	9.8	7.7	5.1	2.6
360.0	15.3	14.5	13.6	13.2	12.4	11.5	10.2	8.1	5.5	2.6

C\γ	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.6	2.1	2.1	1.7	1.7	1.3	0.9	0.9	0.9	0.4
30.0	2.6	2.1	2.1	1.7	1.7	1.3	1.3	0.9	0.4	0.4
60.0	2.6	2.6	2.1	1.7	1.7	1.3	0.9	0.9	0.9	0.4
90.0	2.6	2.1	1.7	1.7	1.3	1.3	1.3	0.9	0.4	0.4
120.0	2.1	2.1	1.7	1.3	1.3	0.9	0.9	0.9	0.4	0.4
150.0	2.1	2.1	1.7	1.3	1.3	0.9	0.9	0.4	0.4	0.4
180.0	2.1	1.7	1.7	1.3	1.3	0.9	0.9	0.4	0.4	0.4
210.0	2.1	1.7	1.7	1.3	1.3	0.9	0.9	0.4	0.4	0.4
240.0	2.1	1.7	1.3	1.3	1.3	0.9	0.9	0.4	0.4	0.4
270.0	2.1	1.7	1.7	1.3	1.3	0.9	0.9	0.4	0.4	0.4
300.0	2.1	2.1	1.7	1.3	1.3	1.3	0.9	0.9	0.9	0.4
330.0	2.6	2.1	2.1	1.7	1.3	1.3	0.9	0.9	0.9	0.4
360.0	2.6	2.1	2.1	1.7	1.7	1.3	0.9	0.9	0.9	0.4

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### Intensity Data [cd]

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C\γ	90.0	91.0	92.0	93.0	94.0	95.0	96.0	97.0	98.0	99.0
0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.0	0.4	0.4
30.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.0	0.4
60.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
90.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
120.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
150.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
180.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
210.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4
240.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
270.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.0
300.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
330.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
360.0	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.0	0.4	0.4

C\γ	100.0	101.0	102.0	103.0	104.0	105.0	106.0	107.0	108.0	109.0
0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
30.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4
60.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4
90.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
120.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
150.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
180.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
210.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
240.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
270.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
300.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
330.0	0.4	0.4	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4
360.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

C\γ	110.0	111.0	112.0	113.0	114.0	115.0	116.0	117.0	118.0	119.0
0.0	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4
30.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
60.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
90.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
120.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
150.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
180.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
210.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
240.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
270.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
300.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
330.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
360.0	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4

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**Intensity Data [cd]**

C\γ	120.0	121.0	122.0	123.0	124.0	125.0	126.0	127.0	128.0	129.0
0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9	1.3	1.3
30.0	0.4	0.4	0.4	0.4	0.9	0.9	0.9	0.9	1.3	1.3
60.0	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9	1.3
90.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9	1.3
120.0	0.4	0.4	0.4	0.4	0.9	0.9	1.3	1.3	1.7	1.7
150.0	0.4	0.4	0.4	0.4	0.9	0.9	1.3	1.7	1.7	2.1
180.0	0.4	0.4	0.4	0.4	0.9	0.9	1.3	1.7	1.7	2.1
210.0	0.4	0.4	0.4	0.9	0.9	0.9	1.3	1.3	1.7	2.1
240.0	0.4	0.4	0.4	0.4	0.9	0.9	1.3	1.3	1.7	2.1
270.0	0.4	0.4	0.4	0.9	0.9	0.9	1.3	1.3	1.7	2.1
300.0	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9	1.3	1.3
330.0	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9	0.9	1.3
360.0	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9	1.3	1.3

C\γ	130.0	131.0	132.0	133.0	134.0	135.0	136.0	137.0	138.0	139.0
0.0	1.3	1.7	2.1	2.6	3.0	3.8	4.3	5.1	6.0	6.8
30.0	1.3	1.7	2.1	2.6	3.0	3.8	4.3	5.1	6.0	6.8
60.0	1.3	1.7	2.1	2.6	3.0	3.8	4.3	5.1	5.5	6.4
90.0	1.7	1.7	2.1	2.6	3.4	3.8	4.3	5.1	6.0	6.8
120.0	2.6	3.0	3.4	4.3	4.7	6.0	6.8	7.7	9.4	10.6
150.0	2.6	3.0	3.8	4.3	5.1	6.4	6.8	8.5	9.4	11.1
180.0	2.6	3.0	3.8	4.3	5.1	6.4	7.2	8.5	9.4	11.5
210.0	2.6	3.0	3.8	4.7	5.1	6.4	7.2	8.5	9.8	11.5
240.0	2.6	3.0	3.8	4.7	5.5	6.4	7.2	8.5	9.8	11.1
270.0	2.6	3.0	3.8	4.7	5.1	6.4	7.2	8.1	10.2	11.5
300.0	1.7	1.7	2.1	3.0	3.4	4.3	4.7	5.5	6.4	7.2
330.0	1.3	1.7	2.1	3.0	3.4	3.8	4.7	5.5	6.0	7.2
360.0	1.3	1.7	2.1	2.6	3.0	3.8	4.3	5.1	6.0	6.8

C\γ	140.0	141.0	142.0	143.0	144.0	145.0	146.0	147.0	148.0	149.0
0.0	8.1	8.9	10.2	11.1	12.8	14.1	15.3	16.6	17.9	19.6
30.0	7.7	8.5	9.8	11.1	12.4	13.6	14.9	16.2	17.9	19.2
60.0	7.7	8.9	9.8	11.1	12.4	13.6	14.9	16.2	17.5	19.6
90.0	7.7	8.9	9.8	11.5	12.4	13.6	15.3	16.6	17.9	19.6
120.0	11.9	13.6	14.9	17.0	18.7	20.4	21.7	23.9	25.6	28.1
150.0	12.4	13.6	16.2	17.5	19.2	20.4	22.2	24.3	26.4	28.1
180.0	12.8	14.1	16.2	17.5	19.6	20.4	22.6	24.3	26.8	28.5
210.0	12.8	14.1	16.2	17.9	19.6	20.9	22.6	25.1	27.3	28.5
240.0	12.8	14.5	16.2	17.9	20.0	20.9	22.6	25.1	27.3	29.4
270.0	12.8	14.5	16.2	17.9	20.0	20.9	22.6	25.1	27.3	29.4
300.0	8.1	9.4	10.6	11.9	13.2	14.5	15.8	17.5	18.7	20.0
330.0	8.1	9.4	10.2	11.9	12.8	14.1	15.8	17.0	18.7	20.0
360.0	8.1	8.9	10.2	11.1	12.8	14.1	15.3	16.6	17.9	19.6

**R854 WNL (CRI90 1400mA 40D)****Intensity Data [cd]****Page7**

C\γ	150.0	151.0	152.0	153.0	154.0	155.0	156.0	157.0	158.0	159.0
0.0	20.4	22.2	23.4	25.1	27.3	29.0	31.1	32.4	34.1	36.2
30.0	20.4	21.7	23.0	24.7	27.3	29.0	30.7	32.4	34.1	35.8
60.0	20.4	21.7	23.4	25.1	27.3	29.0	31.1	32.8	34.5	35.8
90.0	20.4	22.2	23.4	25.1	27.3	29.0	30.7	32.8	34.5	35.8
120.0	29.8	32.4	34.5	36.2	38.8	40.5	42.2	44.3	46.0	47.3
150.0	30.2	32.8	34.5	37.1	38.8	40.9	43.0	44.7	46.4	47.7
180.0	30.2	32.8	34.9	37.1	39.2	40.9	43.0	45.2	46.0	47.7
210.0	31.5	33.2	34.9	37.5	39.2	41.7	43.4	45.2	46.9	47.7
240.0	31.1	33.2	35.8	37.5	39.6	41.7	43.4	45.2	46.9	48.1
270.0	31.1	33.2	35.4	37.5	39.2	41.7	43.4	45.2	47.3	48.6
300.0	20.9	22.6	23.9	25.6	27.7	29.8	31.5	33.2	34.9	36.2
330.0	20.9	22.2	23.9	25.6	27.7	29.4	31.1	32.8	34.1	35.8
360.0	20.4	22.2	23.4	25.1	27.3	29.0	31.1	32.4	34.1	36.2

C\γ	160.0	161.0	162.0	163.0	164.0	165.0	166.0	167.0	168.0	169.0
0.0	37.9	39.2	40.5	42.2	43.4	44.3	46.0	47.3	48.6	49.4
30.0	37.9	39.6	40.9	42.6	43.9	45.2	46.4	47.3	49.0	49.8
60.0	37.9	39.2	40.9	42.2	43.4	45.2	46.4	47.7	48.6	49.8
90.0	37.9	39.6	40.9	42.2	43.4	45.2	46.4	47.3	48.6	49.8
120.0	49.0	50.3	51.5	52.8	53.7	54.5	55.4	55.8	56.7	56.7
150.0	49.0	50.7	51.5	52.8	53.7	54.5	55.4	55.8	56.7	56.7
180.0	49.4	50.7	51.5	52.8	54.1	54.5	55.4	56.2	56.7	57.1
210.0	49.4	50.7	52.0	52.8	54.1	54.9	55.4	56.2	56.7	57.1
240.0	49.4	50.7	52.0	53.2	53.7	54.9	55.8	56.2	56.7	57.1
270.0	49.8	50.7	52.0	53.2	54.1	54.9	55.4	56.2	56.7	57.1
300.0	37.9	39.2	40.9	42.2	43.4	45.2	46.0	47.3	48.1	49.0
330.0	37.9	39.2	40.5	42.2	43.4	44.7	46.0	46.9	48.1	49.0
360.0	37.9	39.2	40.5	42.2	43.4	44.3	46.0	47.3	48.6	49.4

C\γ	170.0	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0
0.0	50.3	51.1	51.5	52.0	52.4	53.2	54.1	54.9	55.8	56.7
30.0	50.3	51.1	52.0	52.4	52.8	53.7	54.1	54.9	55.8	57.1
60.0	50.7	51.5	52.0	52.8	53.2	54.1	54.5	55.4	56.2	57.5
90.0	50.7	51.5	52.0	52.4	53.7	54.1	54.9	55.4	56.7	57.5
120.0	57.1	57.1	57.1	57.1	57.1	56.7	57.1	57.1	57.1	57.5
150.0	57.1	57.1	57.1	56.7	56.7	56.7	56.7	57.1	57.1	57.5
180.0	57.1	57.1	56.7	56.7	56.7	56.7	56.7	57.1	57.1	57.5
210.0	57.1	57.1	57.1	57.1	56.7	56.7	56.7	57.1	57.5	57.9
240.0	57.1	57.1	57.1	56.7	57.1	56.7	57.1	57.5	57.5	57.9
270.0	57.1	57.1	57.1	57.1	57.1	57.1	57.5	57.5	57.9	58.4
300.0	49.8	50.7	51.1	51.5	52.0	52.8	53.7	54.5	55.8	56.7
330.0	49.8	50.7	51.1	52.0	52.0	52.8	53.7	54.9	55.8	56.7
360.0	50.3	51.1	51.5	52.0	52.4	53.2	54.1	54.9	55.8	56.7

Intensity Data [cd]		Page8
C\γ	180.0	
0.0	57.5	
30.0	57.5	
60.0	57.9	
90.0	58.4	
120.0	57.5	
150.0	57.5	
180.0	57.5	
210.0	57.5	
240.0	57.9	
270.0	58.4	
300.0	57.5	
330.0	57.5	
360.0	57.5	

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Zonal flux distribution table

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Gamma [°]	Average I [cd]	Zonal Flux [lm]	Sum Flux [lm]	Effective Flux [lm]	Effective Sum [lm]
0	8594.41	0.00	0.00	0.00	0.00
1	8659.12	8.26	8.26	8.26	8.26
2	8757.31	25.00	33.25	25.00	33.25
3	8858.69	42.13	75.39	42.13	75.39
4	8943.06	59.59	134.97	59.59	134.97
5	9007.81	77.22	212.20	77.22	212.20
6	9042.35	94.86	307.06	94.86	307.06
7	9030.07	112.18	419.23	112.18	419.23
8	8969.94	128.82	548.05	128.82	548.05
9	8846.05	144.39	692.44	144.39	692.44
10	8659.44	158.42	850.86	158.42	850.86
11	8452.60	170.98	1021.85	170.98	1021.85
12	8192.97	181.96	1203.81	181.96	1203.81
13	7906.90	191.06	1394.87	191.06	1394.87
14	7601.33	198.50	1593.37	198.50	1593.37
15	7245.65	203.83	1797.20	203.83	1797.20
16	6903.17	207.32	2004.52	207.32	2004.52
17	6522.11	209.07	2213.59	209.07	2213.59
18	6079.07	207.77	2421.35	207.77	2421.35
19	5654.38	204.14	2625.49	204.14	2625.49
20	5171.04	198.14	2823.63	198.14	2823.63
21	4686.75	189.29	3012.92	189.29	3012.92
22	4205.62	178.70	3191.61	178.70	3191.61
23	3755.48	167.05	3358.66	167.05	3358.66
24	3294.79	154.14	3512.80	154.14	3512.80
25	2903.19	140.93	3653.73	140.93	3653.73
26	2562.48	129.02	3782.75	129.02	3782.75
27	2307.15	119.14	3901.89	119.14	3901.89
28	2123.74	112.18	4014.07	112.18	4014.07
29	1997.83	107.83	4121.90	107.83	4121.90
30	1897.33	105.17	4227.07	105.17	4227.07
31	1762.80	101.86	4328.92	101.86	4328.92
32	1548.18	94.86	4423.78	94.86	4423.78
33	1281.56	83.37	4507.14	83.37	4507.14
34	968.65	68.10	4575.24	68.10	4575.24
35	681.55	51.25	4626.49	19.93	4595.17
36	446.10	35.90	4662.40	0.00	4595.17
37	271.41	23.40	4685.80	0.00	4595.17
38	195.45	15.58	4701.38	0.00	4595.17
39	165.17	12.31	4713.69	0.00	4595.17
40	141.03	10.68	4724.37	0.00	4595.17

**R854 WNL (CRI90 1400mA 40D)**

Zonal flux distribution table

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Gamma [°]	Average I [cd]	Zonal Flux [lm]	Sum Flux [lm]	Effective Flux [lm]	Effective Sum [lm]
41	121.22	9.34	4733.71	0.00	4595.17
42	105.53	8.24	4741.95	0.00	4595.17
43	94.85	7.42	4749.37	0.00	4595.17
44	84.59	6.77	4756.14	0.00	4595.17
45	74.26	6.10	4762.25	0.00	4595.17
46	64.71	5.43	4767.68	0.00	4595.17
47	57.51	4.86	4772.54	0.00	4595.17
48	52.89	4.46	4777.00	0.00	4595.17
49	48.45	4.16	4781.17	0.00	4595.17
50	44.80	3.89	4785.05	0.00	4595.17
51	41.11	3.63	4788.69	0.00	4595.17
52	38.20	3.40	4792.09	0.00	4595.17
53	35.25	3.19	4795.29	0.00	4595.17
54	32.76	3.00	4798.28	0.00	4595.17
55	30.46	2.82	4801.11	0.00	4595.17
56	28.29	2.65	4803.76	0.00	4595.17
57	26.48	2.50	4806.27	0.00	4595.17
58	25.03	2.38	4808.65	0.00	4595.17
59	23.78	2.28	4810.93	0.00	4595.17
60	22.51	2.19	4813.12	0.00	4595.17
61	21.72	2.11	4815.23	0.00	4595.17
62	21.01	2.06	4817.29	0.00	4595.17
63	20.41	2.01	4819.30	0.00	4595.17
64	20.13	1.99	4821.29	0.00	4595.17
65	19.56	1.96	4823.26	0.00	4595.17
66	18.57	1.90	4825.16	0.00	4595.17
67	17.68	1.82	4826.98	0.00	4595.17
68	16.68	1.74	4828.72	0.00	4595.17
69	15.73	1.65	4830.38	0.00	4595.17
70	14.94	1.58	4831.95	0.00	4595.17
71	14.13	1.50	4833.45	0.00	4595.17
72	13.31	1.43	4834.88	0.00	4595.17
73	12.64	1.36	4836.24	0.00	4595.17
74	11.75	1.28	4837.52	0.00	4595.17
75	10.72	1.19	4838.71	0.00	4595.17
76	8.91	1.04	4839.75	0.00	4595.17
77	6.78	0.84	4840.58	0.00	4595.17
78	4.22	0.59	4841.17	0.00	4595.17
79	2.59	0.37	4841.54	0.00	4595.17
80	2.31	0.26	4841.80	0.00	4595.17
81	2.02	0.23	4842.04	0.00	4595.17

**R854 WNL (CRI90 1400mA 40D)**

Zonal flux distribution table

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Gamma [°]	Average I [cd]	Zonal Flux [lm]	Sum Flux [lm]	Effective Flux [lm]	Effective Sum [lm]
82	1.81	0.21	4842.24	0.00	4595.17
83	1.46	0.18	4842.42	0.00	4595.17
84	1.38	0.15	4842.58	0.00	4595.17
85	1.06	0.13	4842.72	0.00	4595.17
86	0.92	0.11	4842.82	0.00	4595.17
87	0.67	0.09	4842.91	0.00	4595.17
88	0.57	0.07	4842.98	0.00	4595.17
89	0.43	0.05	4843.04	0.00	4595.17
90	0.39	0.04	4843.08	0.00	4595.17
91	0.43	0.04	4843.13	0.00	4595.17
92	0.43	0.05	4843.17	0.00	4595.17
93	0.43	0.05	4843.22	0.00	4595.17
94	0.43	0.05	4843.27	0.00	4595.17
95	0.39	0.04	4843.31	0.00	4595.17
96	0.32	0.04	4843.35	0.00	4595.17
97	0.28	0.03	4843.38	0.00	4595.17
98	0.39	0.04	4843.42	0.00	4595.17
99	0.35	0.04	4843.46	0.00	4595.17
100	0.39	0.04	4843.50	0.00	4595.17
101	0.43	0.04	4843.55	0.00	4595.17
102	0.39	0.04	4843.59	0.00	4595.17
103	0.39	0.04	4843.64	0.00	4595.17
104	0.43	0.04	4843.68	0.00	4595.17
105	0.43	0.05	4843.73	0.00	4595.17
106	0.43	0.05	4843.77	0.00	4595.17
107	0.39	0.04	4843.82	0.00	4595.17
108	0.39	0.04	4843.86	0.00	4595.17
109	0.43	0.04	4843.91	0.00	4595.17
110	0.43	0.04	4843.95	0.00	4595.17
111	0.43	0.04	4843.99	0.00	4595.17
112	0.43	0.04	4844.04	0.00	4595.17
113	0.43	0.04	4844.08	0.00	4595.17
114	0.43	0.04	4844.12	0.00	4595.17
115	0.39	0.04	4844.16	0.00	4595.17
116	0.43	0.04	4844.20	0.00	4595.17
117	0.43	0.04	4844.24	0.00	4595.17
118	0.43	0.04	4844.28	0.00	4595.17
119	0.43	0.04	4844.32	0.00	4595.17
120	0.43	0.04	4844.36	0.00	4595.17
121	0.43	0.04	4844.40	0.00	4595.17
122	0.43	0.04	4844.44	0.00	4595.17

**R854 WNL (CRI90 1400mA 40D)**

Zonal flux distribution table

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Gamma [°]	Average I [cd]	Zonal Flux [lm]	Sum Flux [lm]	Effective Flux [lm]	Effective Sum [lm]
123	0.50	0.04	4844.48	0.00	4595.17
124	0.67	0.05	4844.54	0.00	4595.17
125	0.75	0.06	4844.60	0.00	4595.17
126	1.03	0.08	4844.68	0.00	4595.17
127	1.14	0.10	4844.78	0.00	4595.17
128	1.38	0.11	4844.89	0.00	4595.17
129	1.67	0.13	4845.02	0.00	4595.17
130	1.99	0.15	4845.17	0.00	4595.17
131	2.34	0.18	4845.35	0.00	4595.17
132	2.95	0.22	4845.57	0.00	4595.17
133	3.59	0.26	4845.83	0.00	4595.17
134	4.15	0.31	4846.14	0.00	4595.17
135	5.11	0.36	4846.50	0.00	4595.17
136	5.75	0.42	4846.92	0.00	4595.17
137	6.78	0.47	4847.39	0.00	4595.17
138	7.81	0.54	4847.93	0.00	4595.17
139	9.05	0.61	4848.54	0.00	4595.17
140	10.22	0.69	4849.23	0.00	4595.17
141	11.54	0.76	4849.99	0.00	4595.17
142	13.03	0.84	4850.83	0.00	4595.17
143	14.52	0.92	4851.75	0.00	4595.17
144	16.08	1.00	4852.75	0.00	4595.17
145	17.29	1.06	4853.81	0.00	4595.17
146	18.85	1.12	4854.93	0.00	4595.17
147	20.66	1.20	4856.13	0.00	4595.17
148	22.43	1.27	4857.40	0.00	4595.17
149	24.17	1.34	4858.73	0.00	4595.17
150	25.63	1.39	4860.12	0.00	4595.17
151	27.51	1.43	4861.55	0.00	4595.17
152	29.25	1.49	4863.03	0.00	4595.17
153	31.17	1.53	4864.56	0.00	4595.17
154	33.26	1.58	4866.14	0.00	4595.17
155	35.21	1.62	4867.76	0.00	4595.17
156	37.06	1.64	4869.40	0.00	4595.17
157	38.83	1.66	4871.06	0.00	4595.17
158	40.47	1.66	4872.73	0.00	4595.17
159	41.89	1.65	4874.38	0.00	4595.17
160	43.63	1.64	4876.02	0.00	4595.17
161	44.98	1.62	4877.64	0.00	4595.17
162	46.25	1.59	4879.23	0.00	4595.17
163	47.60	1.55	4880.78	0.00	4595.17

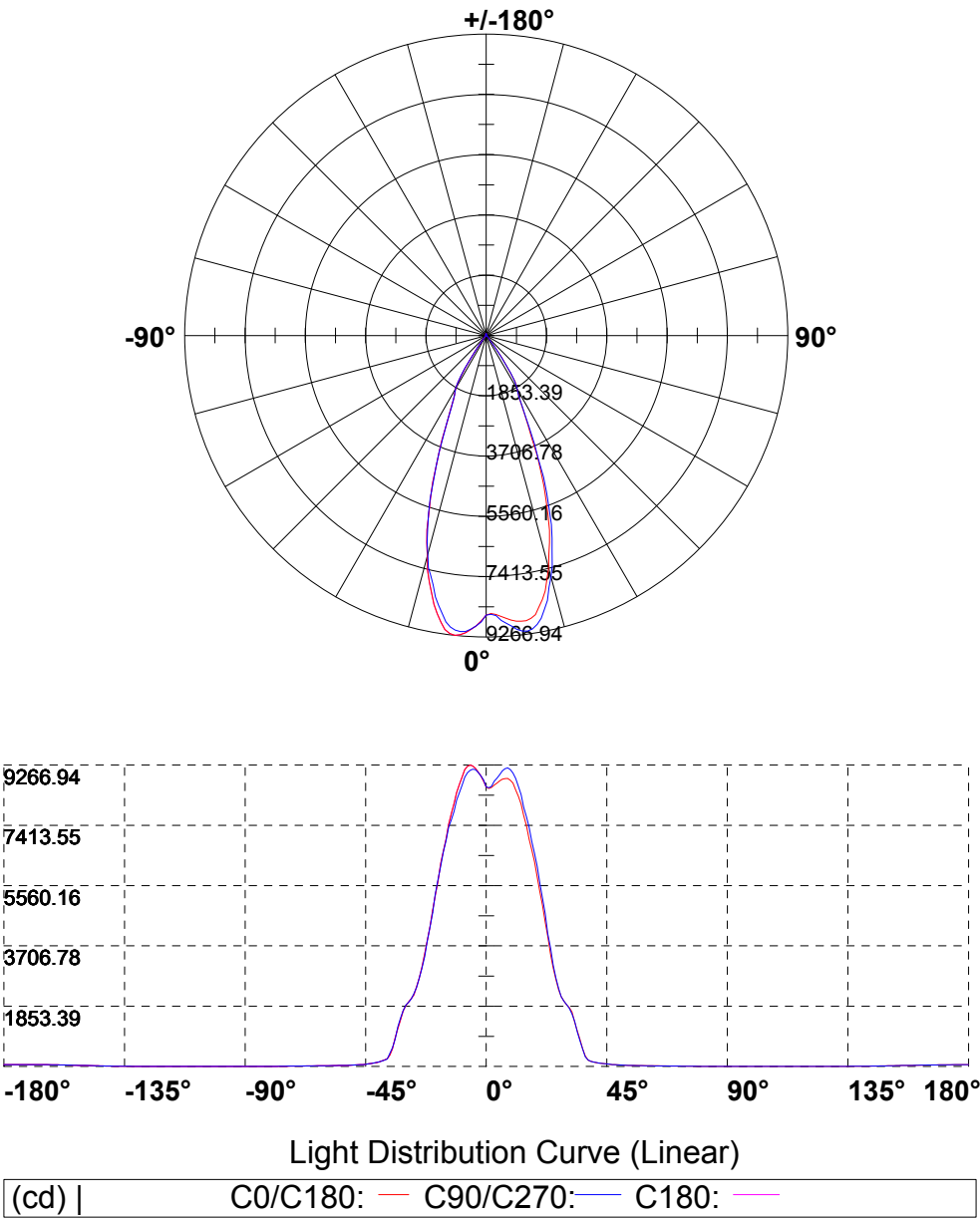
### R854 WNL (CRI90 1400mA 40D)

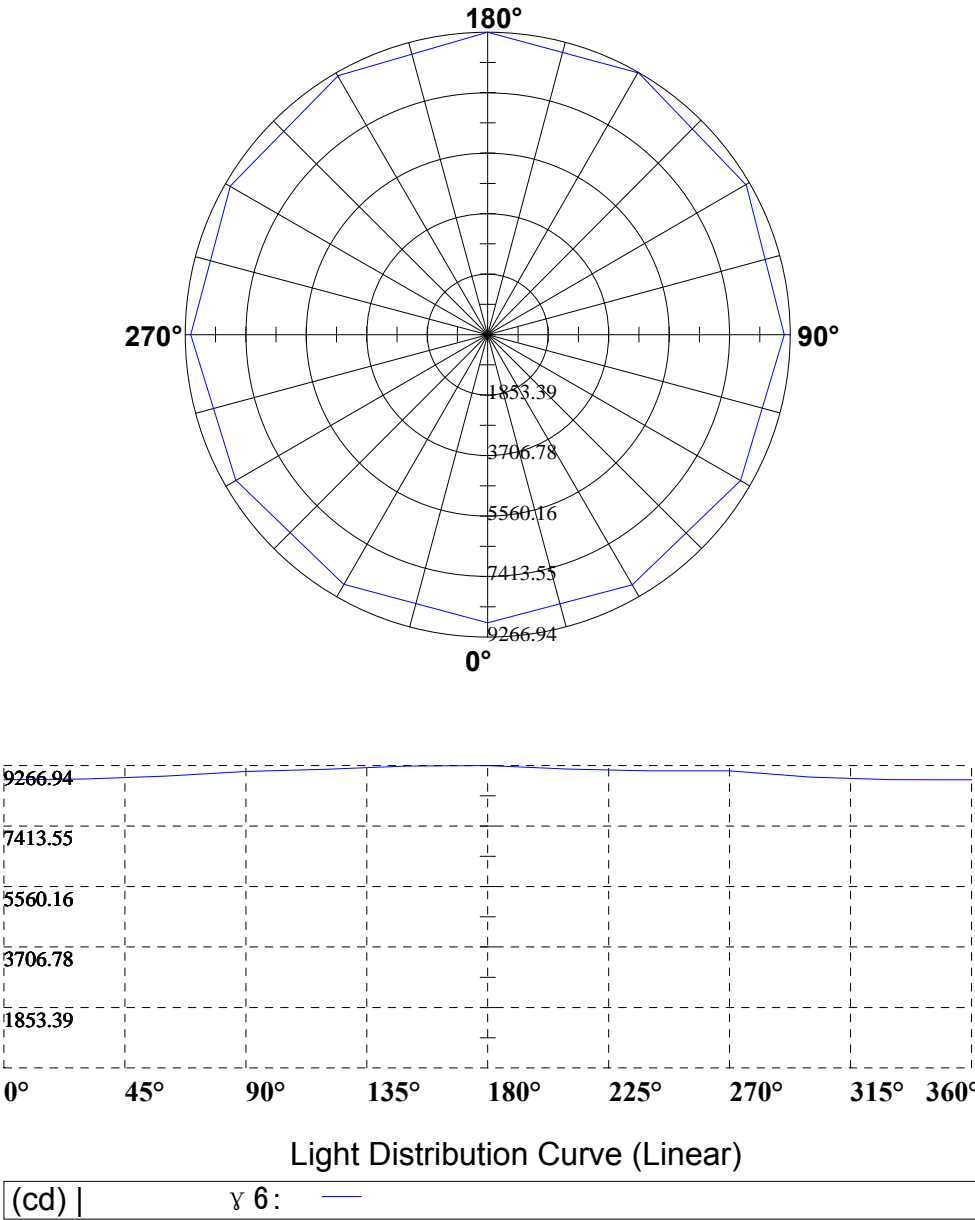
### Zonal flux distribution table

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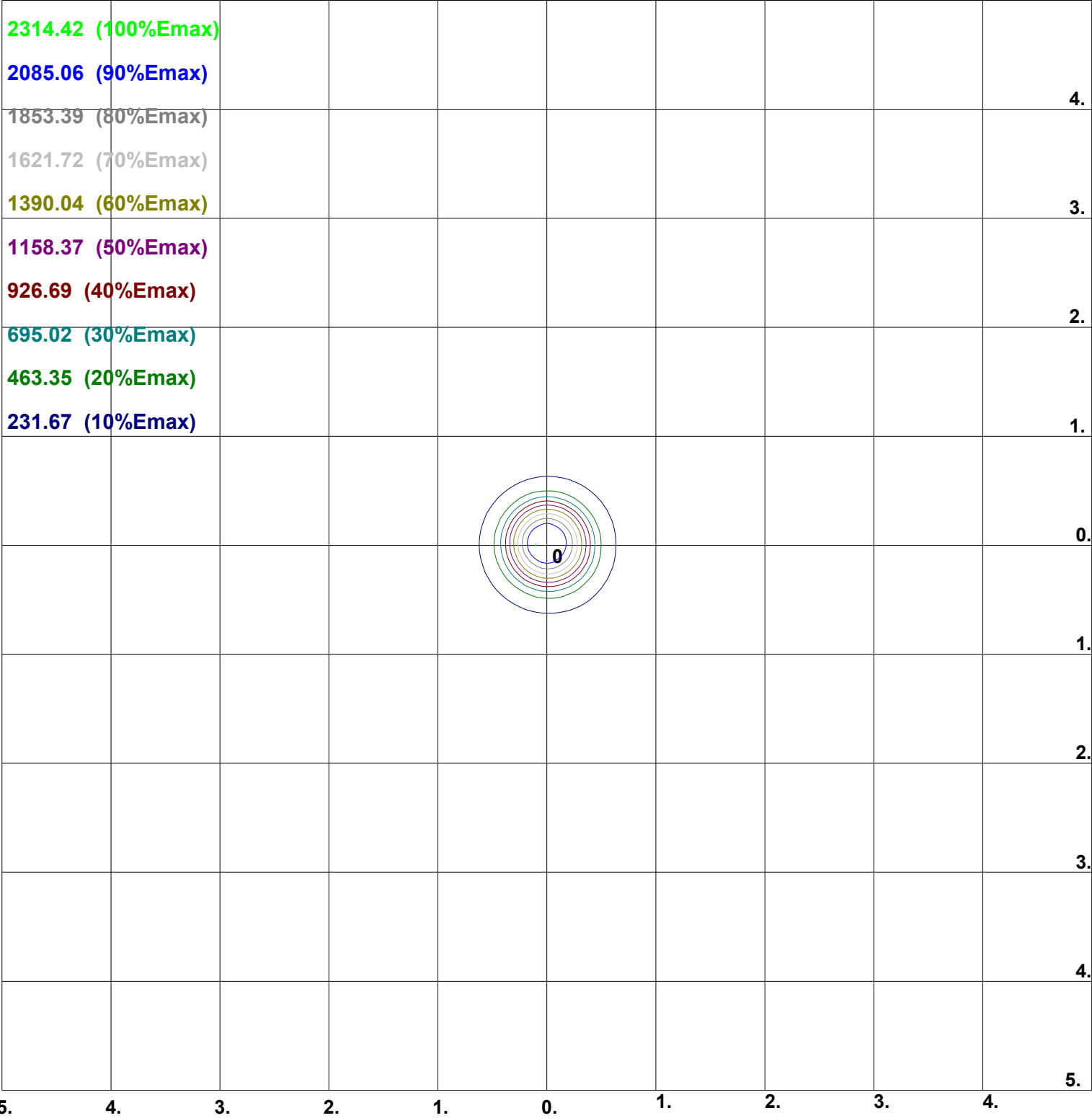
[illegible]

Light Distribution Curve [Unit: cd]





Unit: [lx]



Coordinate Scale: d/h  
Height: 2 m  
Max Illuminance : 2316.74lx

## Luminance Limiting Curve (There is not luminous side)

Diameter: 140mm

Length: -140mm

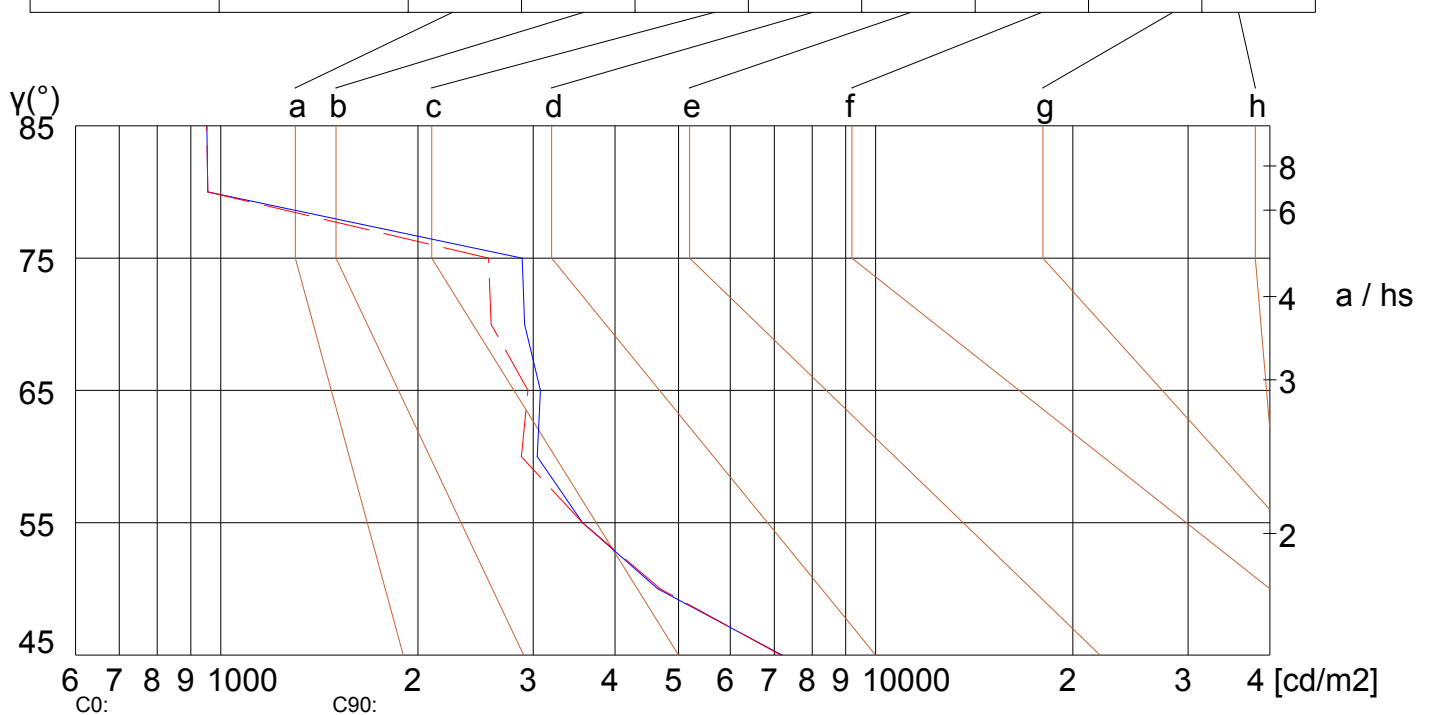
Width: -140mm

Height: 100mm

(cd/m<sup>2</sup>)

$\gamma$	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	7159	4690	3569	2877	2945	2588	2565	956	952
C90	7198	4647	3569	3043	3076	2911	2886	956	952

Glare	Quality	Service Values Illuminance (lx)							
1.15	A	2000	1000	500	≤300				
1.5	B		2000	1000	500	≤300			
1.85	C			2000	1000	500	≤300		
2.2	D				2000	1000	500	≤300	
2.55	E					2000	1000	500	≤300



Luminance Limiting Curve (C0/C90)

**R854 WNL (CRI90 1400mA 40D)**

utilization factor table for indoor luminaire

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RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFCIENTS OF UTILIZATION FOR RHOFC=20															
0	1.03	1.03	1.03	1.01	1.01	1.01	0.97	0.97	0.97	0.92	0.92	0.92	0.89	0.89	0.89	0.87
1	1.00	1.00	0.99	0.99	0.98	0.97	0.95	0.94	0.93	0.90	0.89	0.88	0.84	0.83	0.82	0.77
2	0.95	0.94	0.94	0.94	0.93	0.92	0.90	0.89	0.88	0.86	0.84	0.83	0.81	0.79	0.77	0.73
3	0.91	0.90	0.89	0.89	0.88	0.87	0.86	0.84	0.83	0.82	0.80	0.79	0.78	0.75	0.73	0.70
4	0.86	0.85	0.84	0.85	0.83	0.82	0.82	0.80	0.79	0.79	0.76	0.74	0.75	0.72	0.70	0.66
5	0.82	0.81	0.80	0.81	0.79	0.78	0.78	0.76	0.75	0.75	0.73	0.71	0.72	0.69	0.66	0.63
6	0.78	0.77	0.76	0.77	0.76	0.75	0.75	0.73	0.71	0.72	0.69	0.67	0.69	0.66	0.63	0.60
7	0.75	0.74	0.73	0.74	0.72	0.71	0.72	0.69	0.68	0.69	0.66	0.64	0.66	0.63	0.60	0.57
8	0.71	0.70	0.70	0.71	0.69	0.68	0.69	0.66	0.65	0.66	0.63	0.61	0.64	0.60	0.58	0.55
9	0.68	0.67	0.67	0.68	0.66	0.65	0.66	0.63	0.62	0.64	0.61	0.59	0.61	0.58	0.55	0.52
10	0.66	0.65	0.64	0.65	0.63	0.62	0.63	0.61	0.59	0.61	0.58	0.56	0.59	0.56	0.53	0.50

