

R854 WNL (CRI90 1400mA 12D)

Luminaire Name: R854 WNL (CRI90 1400mA 12D)

Report NO.: 01313217031107A

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: 230.1 V

Current: 0.244 A

Power: 54.404 W

Power Factor: 0.9691

Ballast Type: HEP LTC60W1400-1CZ UNI

Width: -140mm

Height: 100mm

Optical Component: 12D Reflector DC(V:37.37V I:1.369A P:51.16W)

Photometric Results

Lumens: 4944.62 lm

Efficiency: 87.77%

Central Intensity: 64179.68cd

Maximum Intensity: 65049.621cd

Beam Angle(10%): Left: -11.1 Right:10.6

Maximum s/h: C0_180: 0.11 C90_270: 0.11

Effective Luminous Flux: 2574.55 lm

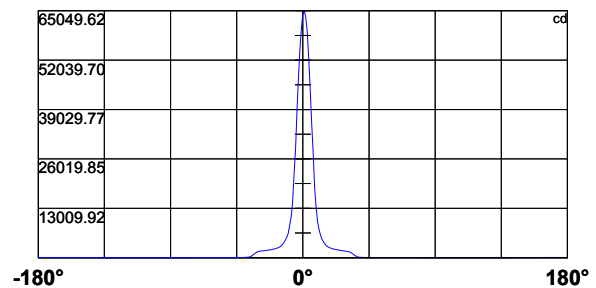
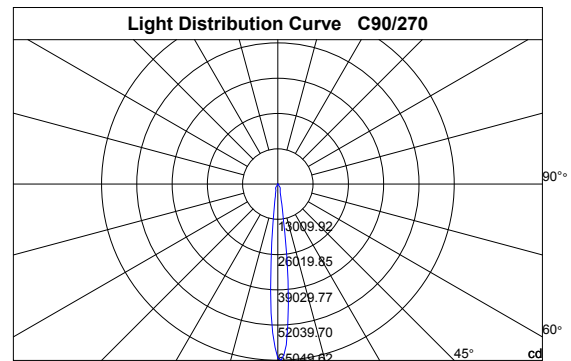
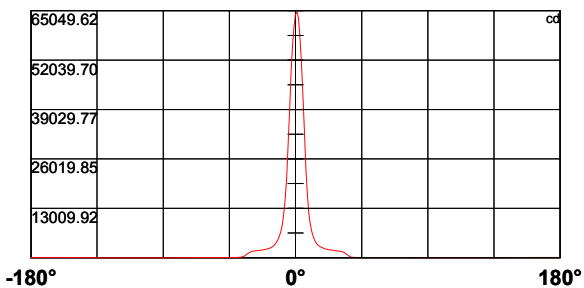
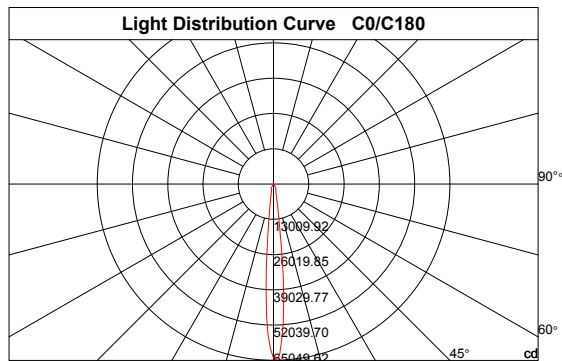
Angle of maximum intensity: C:60.0 G:1.0

Half Peak Side Angle(50%): Left: -5.6 Right:5.3

Up Flux Rate: 0.95%

Down Flux Rate: 86.82%

CIE Classification: Direct



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Intensity Data [cd]

C\γ	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
0.0	64179.7	64606.6	63090.2	57808.2	51376.0	43125.0	34158.4	23347.3	17013.2	11824.9
30.0	64179.7	64934.6	63030.5	59175.5	53378.1	44262.4	35444.8	27002.1	17733.1	13541.5
60.0	64179.7	65049.6	63737.6	60385.3	54123.5	46711.7	35078.5	26699.7	19556.2	13439.3
90.0	64179.7	64904.8	63094.4	59380.0	52466.5	44552.0	35777.1	27385.5	18205.9	13320.0
120.0	64179.7	62813.3	59273.5	53603.9	43159.1	35934.7	25191.8	18768.2	13997.3	10227.5
150.0	64179.7	61876.2	57607.9	50012.9	41732.1	33029.6	23922.4	17788.4	12702.4	9375.6
180.0	64179.7	60973.1	56163.9	49314.4	39491.5	30899.7	21093.9	15611.7	11705.6	8723.8
210.0	64179.7	60240.4	54954.2	47840.5	37800.4	29268.3	21916.1	14593.7	10921.8	8498.1
240.0	64179.7	60768.6	55622.9	46013.1	37268.0	28706.0	20344.3	14930.2	10551.2	8199.9
270.0	64179.7	60278.8	54890.3	47674.4	39031.5	28936.0	21630.7	14367.9	10670.5	8583.3
300.0	64179.7	63754.7	60939.0	53902.0	46409.3	36113.6	27645.3	20425.2	14129.4	10402.2
330.0	64179.7	64044.3	61531.1	56998.8	48960.8	40347.7	28680.4	22401.7	16395.5	10960.2
360.0	64179.7	64606.6	63090.2	57808.2	51376.0	43125.0	34158.4	23347.3	17013.2	11824.9

C\γ	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
0.0	8949.6	7002.9	5669.6	4506.7	3906.1	3395.0	3084.0	2849.7	2641.0	2500.4
30.0	9188.1	7177.6	5793.2	4719.7	4093.6	3599.4	3135.1	2883.8	2687.9	2509.0
60.0	10044.3	7773.9	5814.5	4860.3	4089.3	3595.2	3224.6	2909.4	2700.6	2538.8
90.0	9584.3	7471.5	6010.4	4851.8	4157.5	3637.8	3152.2	2892.3	2687.9	2513.2
120.0	8067.8	6542.9	5137.2	4404.5	3838.0	3348.1	3028.6	2756.0	2577.1	2445.1
150.0	7450.2	6087.1	4958.3	4263.9	3723.0	3199.0	2917.9	2666.6	2517.5	2389.7
180.0	6990.1	5750.6	4728.2	4068.0	3569.6	3079.8	2815.6	2581.4	2440.8	2330.0
210.0	6611.0	5482.2	4540.8	3927.4	3458.9	3007.3	2760.3	2577.1	2406.7	2300.2
240.0	6619.5	5188.3	4442.8	3867.8	3356.6	3032.9	2785.8	2568.6	2428.0	2287.4
270.0	6415.1	5345.9	4570.6	3897.6	3458.9	3024.4	2794.4	2606.9	2449.3	2338.6
300.0	7935.8	5840.0	4830.5	4131.9	3556.8	3199.0	2900.8	2709.2	2564.3	2398.2
330.0	8357.5	6568.4	5184.0	4391.7	3659.1	3271.4	2994.6	2756.0	2598.4	2466.4
360.0	8949.6	7002.9	5669.6	4506.7	3906.1	3395.0	3084.0	2849.7	2641.0	2500.4

C\γ	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
0.0	2351.3	2257.6	2176.7	2100.0	2031.9	1976.5	1912.6	1853.0	1797.6	1738.0
30.0	2385.4	2283.2	2181.0	2108.5	2019.1	1963.7	1908.3	1835.9	1789.1	1742.2
60.0	2368.4	2270.4	2181.0	2095.8	2027.6	1963.7	1908.3	1848.7	1780.5	1738.0
90.0	2389.7	2278.9	2189.5	2117.1	2023.3	1963.7	1899.8	1835.9	1789.1	1733.7
120.0	2308.7	2219.3	2142.6	2065.9	2002.1	1946.7	1870.0	1823.1	1780.5	1720.9
150.0	2261.9	2198.0	2125.6	2040.4	1985.0	1933.9	1865.7	1823.1	1763.5	1716.7
180.0	2223.6	2146.9	2087.2	2002.1	1955.2	1904.1	1840.2	1797.6	1742.2	1699.6
210.0	2198.0	2125.6	2061.7	1980.8	1933.9	1887.0	1827.4	1784.8	1746.5	1691.1
240.0	2206.5	2129.8	2057.4	1997.8	1946.7	1899.8	1840.2	1780.5	1746.5	1703.9
270.0	2244.9	2155.4	2087.2	2027.6	1959.5	1916.9	1848.7	1801.8	1763.5	1712.4
300.0	2300.2	2215.0	2112.8	2053.2	1993.5	1938.2	1882.8	1827.4	1759.2	1725.2
330.0	2347.1	2253.4	2176.7	2087.2	2023.3	1959.5	1912.6	1848.7	1789.1	1742.2
360.0	2351.3	2257.6	2176.7	2100.0	2031.9	1976.5	1912.6	1853.0	1797.6	1738.0

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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	1695.4	1644.2	1546.3	1350.3	1069.2	813.6	562.3	268.4	140.6	102.2
30.0	1695.4	1657.0	1571.8	1324.8	1082.0	788.0	536.7	319.5	153.3	106.5
60.0	1686.8	1644.2	1537.7	1337.5	1056.4	800.8	553.8	264.1	144.8	102.2
90.0	1682.6	1648.5	1478.1	1265.1	1005.3	698.6	451.5	242.8	115.0	93.7
120.0	1661.3	1507.9	1290.7	1030.8	702.8	455.8	255.6	132.1	110.8	85.2
150.0	1648.5	1469.6	1239.6	975.5	660.3	417.4	230.0	127.8	106.5	80.9
180.0	1644.2	1422.7	1188.5	932.9	639.0	400.4	217.2	127.8	102.2	76.7
210.0	1631.5	1410.0	1184.2	924.4	626.2	400.4	217.2	123.5	102.2	85.2
240.0	1644.2	1473.8	1243.8	907.3	651.7	417.4	225.8	123.5	102.2	85.2
270.0	1652.8	1520.7	1303.5	1001.0	736.9	413.2	221.5	136.3	106.5	85.2
300.0	1682.6	1618.7	1495.1	1286.4	984.0	707.1	417.4	225.8	127.8	93.7
330.0	1691.1	1635.7	1525.0	1329.0	992.5	766.7	511.2	238.5	132.1	98.0
360.0	1695.4	1644.2	1546.3	1350.3	1069.2	813.6	562.3	268.4	140.6	102.2

C\γ	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0
0.0	80.9	68.2	59.6	55.4	51.1	46.9	46.9	38.3	38.3	34.1
30.0	89.5	68.2	68.2	55.4	51.1	51.1	46.9	42.6	38.3	34.1
60.0	80.9	72.4	63.9	55.4	51.1	51.1	46.9	38.3	38.3	38.3
90.0	80.9	68.2	59.6	55.4	51.1	46.9	42.6	38.3	38.3	34.1
120.0	72.4	63.9	55.4	51.1	46.9	42.6	38.3	34.1	34.1	34.1
150.0	72.4	63.9	55.4	51.1	46.9	42.6	38.3	34.1	34.1	34.1
180.0	72.4	63.9	55.4	51.1	46.9	42.6	38.3	34.1	34.1	34.1
210.0	72.4	63.9	55.4	51.1	46.9	46.9	38.3	34.1	34.1	34.1
240.0	68.2	63.9	55.4	51.1	51.1	42.6	42.6	38.3	34.1	34.1
270.0	72.4	63.9	59.6	51.1	51.1	42.6	38.3	38.3	34.1	34.1
300.0	72.4	68.2	59.6	51.1	51.1	46.9	42.6	38.3	34.1	34.1
330.0	76.7	68.2	59.6	51.1	51.1	46.9	42.6	38.3	38.3	34.1
360.0	80.9	68.2	59.6	55.4	51.1	46.9	46.9	38.3	38.3	34.1

C\γ	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
0.0	34.1	34.1	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8
30.0	34.1	34.1	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8
60.0	34.1	34.1	29.8	29.8	29.8	29.8	29.8	29.8	29.8	34.1
90.0	34.1	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8
120.0	29.8	29.8	29.8	29.8	29.8	25.6	29.8	29.8	29.8	29.8
150.0	29.8	29.8	25.6	25.6	29.8	29.8	29.8	29.8	29.8	29.8
180.0	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8	34.1
210.0	29.8	29.8	29.8	29.8	34.1	29.8	34.1	29.8	38.3	38.3
240.0	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	38.3
270.0	34.1	29.8	34.1	34.1	34.1	34.1	34.1	34.1	34.1	38.3
300.0	34.1	34.1	34.1	29.8	29.8	34.1	29.8	29.8	34.1	34.1
330.0	34.1	34.1	29.8	29.8	29.8	29.8	29.8	29.8	29.8	34.1
360.0	34.1	34.1	29.8	29.8	29.8	29.8	29.8	29.8	29.8	29.8

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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	34.1	34.1	34.1	29.8	29.8	25.6	25.6	25.6	21.3	21.3
30.0	34.1	34.1	34.1	29.8	29.8	25.6	21.3	21.3	21.3	17.0
60.0	34.1	38.3	38.3	29.8	25.6	25.6	21.3	21.3	17.0	17.0
90.0	34.1	34.1	34.1	29.8	25.6	25.6	21.3	21.3	17.0	17.0
120.0	34.1	34.1	29.8	29.8	25.6	21.3	21.3	17.0	17.0	17.0
150.0	29.8	34.1	29.8	29.8	25.6	21.3	21.3	21.3	17.0	17.0
180.0	34.1	34.1	29.8	25.6	25.6	21.3	21.3	17.0	17.0	17.0
210.0	38.3	34.1	29.8	25.6	25.6	21.3	21.3	21.3	17.0	17.0
240.0	38.3	34.1	29.8	25.6	25.6	21.3	21.3	21.3	21.3	21.3
270.0	38.3	38.3	34.1	29.8	25.6	25.6	21.3	21.3	21.3	17.0
300.0	38.3	38.3	34.1	34.1	29.8	25.6	25.6	25.6	21.3	17.0
330.0	34.1	34.1	38.3	34.1	29.8	25.6	25.6	21.3	21.3	21.3
360.0	34.1	34.1	34.1	29.8	29.8	25.6	25.6	25.6	21.3	21.3

C\γ	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0
0.0	17.0	17.0	17.0	17.0	12.8	12.8	12.8	8.5	8.5	4.3
30.0	17.0	17.0	17.0	17.0	17.0	12.8	12.8	8.5	8.5	4.3
60.0	17.0	17.0	17.0	17.0	17.0	12.8	12.8	8.5	8.5	4.3
90.0	17.0	17.0	12.8	17.0	17.0	12.8	12.8	8.5	8.5	4.3
120.0	17.0	17.0	17.0	12.8	12.8	12.8	8.5	4.3	4.3	4.3
150.0	17.0	17.0	12.8	17.0	12.8	12.8	8.5	8.5	4.3	4.3
180.0	17.0	12.8	17.0	12.8	12.8	8.5	8.5	8.5	4.3	4.3
210.0	17.0	17.0	12.8	12.8	12.8	12.8	8.5	4.3	4.3	4.3
240.0	17.0	17.0	17.0	17.0	17.0	12.8	8.5	4.3	4.3	4.3
270.0	17.0	17.0	17.0	17.0	12.8	12.8	8.5	8.5	4.3	4.3
300.0	21.3	17.0	17.0	17.0	17.0	12.8	12.8	8.5	8.5	4.3
330.0	21.3	17.0	17.0	17.0	17.0	12.8	12.8	12.8	8.5	4.3
360.0	17.0	17.0	17.0	17.0	12.8	12.8	12.8	8.5	8.5	4.3

C\γ	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.0	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.0	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.0	4.3	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0
120.0	4.3	4.3	4.3	4.3	0.0	0.0	4.3	0.0	0.0	0.0
150.0	4.3	0.0	4.3	0.0	0.0	0.0	0.0	4.3	0.0	0.0
180.0	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.0	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.0	4.3	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.0	4.3	4.3	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0
330.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0
360.0	4.3	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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

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

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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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
210.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
240.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0
270.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
300.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
330.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
360.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

C\γ	130.0	131.0	132.0	133.0	134.0	135.0	136.0	137.0	138.0	139.0
0.0	0.0	0.0	0.0	0.0	4.3	4.3	4.3	4.3	4.3	4.3
30.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3
60.0	0.0	4.3	0.0	0.0	0.0	0.0	4.3	4.3	0.0	4.3
90.0	0.0	0.0	0.0	0.0	4.3	4.3	0.0	4.3	4.3	4.3
120.0	4.3	4.3	4.3	0.0	4.3	4.3	4.3	4.3	8.5	4.3
150.0	0.0	0.0	0.0	4.3	4.3	4.3	4.3	4.3	4.3	8.5
180.0	0.0	0.0	0.0	4.3	4.3	4.3	4.3	4.3	8.5	8.5
210.0	0.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	8.5	8.5
240.0	0.0	4.3	4.3	4.3	4.3	0.0	4.3	4.3	8.5	8.5
270.0	0.0	0.0	4.3	4.3	4.3	4.3	4.3	4.3	8.5	8.5
300.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3	4.3
330.0	0.0	0.0	0.0	4.3	0.0	4.3	0.0	4.3	4.3	4.3
360.0	0.0	0.0	0.0	0.0	4.3	4.3	4.3	4.3	4.3	4.3

C\γ	140.0	141.0	142.0	143.0	144.0	145.0	146.0	147.0	148.0	149.0
0.0	4.3	4.3	4.3	8.5	8.5	12.8	12.8	17.0	21.3	21.3
30.0	4.3	4.3	8.5	8.5	12.8	12.8	17.0	17.0	17.0	25.6
60.0	4.3	4.3	8.5	8.5	12.8	12.8	12.8	17.0	21.3	25.6
90.0	4.3	4.3	8.5	8.5	12.8	12.8	12.8	21.3	21.3	21.3
120.0	8.5	12.8	17.0	17.0	21.3	25.6	25.6	29.8	34.1	34.1
150.0	8.5	12.8	17.0	17.0	21.3	25.6	25.6	29.8	34.1	34.1
180.0	12.8	12.8	17.0	21.3	21.3	25.6	29.8	34.1	34.1	34.1
210.0	8.5	12.8	17.0	17.0	25.6	25.6	29.8	29.8	34.1	34.1
240.0	8.5	12.8	17.0	21.3	21.3	25.6	29.8	29.8	34.1	34.1
270.0	8.5	12.8	17.0	21.3	21.3	25.6	29.8	29.8	34.1	38.3
300.0	4.3	8.5	8.5	8.5	8.5	12.8	17.0	17.0	21.3	25.6
330.0	4.3	4.3	8.5	8.5	8.5	12.8	17.0	21.3	21.3	25.6
360.0	4.3	4.3	4.3	8.5	8.5	12.8	12.8	17.0	21.3	21.3

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C\γ	150.0	151.0	152.0	153.0	154.0	155.0	156.0	157.0	158.0	159.0
0.0	25.6	29.8	29.8	29.8	34.1	34.1	34.1	38.3	38.3	38.3
30.0	25.6	25.6	29.8	29.8	34.1	34.1	34.1	38.3	38.3	42.6
60.0	25.6	25.6	29.8	29.8	34.1	34.1	34.1	38.3	38.3	38.3
90.0	25.6	25.6	29.8	29.8	34.1	34.1	38.3	38.3	38.3	38.3
120.0	34.1	38.3	38.3	42.6	42.6	42.6	46.9	51.1	46.9	51.1
150.0	38.3	38.3	42.6	42.6	42.6	42.6	46.9	46.9	51.1	51.1
180.0	38.3	38.3	42.6	42.6	42.6	42.6	46.9	46.9	51.1	51.1
210.0	38.3	38.3	42.6	42.6	42.6	46.9	46.9	46.9	46.9	51.1
240.0	38.3	38.3	42.6	42.6	42.6	42.6	46.9	51.1	51.1	51.1
270.0	38.3	38.3	42.6	42.6	42.6	46.9	46.9	46.9	51.1	51.1
300.0	25.6	29.8	29.8	29.8	34.1	34.1	34.1	38.3	38.3	38.3
330.0	25.6	29.8	29.8	29.8	34.1	34.1	34.1	38.3	38.3	42.6
360.0	25.6	29.8	29.8	29.8	34.1	34.1	34.1	38.3	38.3	38.3

C\γ	160.0	161.0	162.0	163.0	164.0	165.0	166.0	167.0	168.0	169.0
0.0	42.6	42.6	42.6	46.9	46.9	51.1	51.1	55.4	55.4	55.4
30.0	42.6	42.6	46.9	46.9	46.9	51.1	51.1	51.1	55.4	55.4
60.0	42.6	42.6	46.9	46.9	46.9	51.1	51.1	51.1	55.4	55.4
90.0	42.6	42.6	42.6	46.9	46.9	51.1	51.1	55.4	55.4	55.4
120.0	51.1	55.4	55.4	59.6	59.6	59.6	59.6	63.9	63.9	68.2
150.0	51.1	51.1	55.4	55.4	59.6	59.6	63.9	63.9	63.9	63.9
180.0	51.1	55.4	55.4	59.6	59.6	59.6	63.9	63.9	63.9	68.2
210.0	55.4	55.4	55.4	55.4	59.6	59.6	63.9	63.9	63.9	63.9
240.0	55.4	51.1	55.4	55.4	59.6	59.6	59.6	63.9	63.9	63.9
270.0	51.1	55.4	55.4	59.6	59.6	59.6	63.9	63.9	63.9	63.9
300.0	42.6	42.6	46.9	46.9	51.1	51.1	51.1	51.1	55.4	55.4
330.0	42.6	42.6	46.9	46.9	46.9	51.1	51.1	51.1	55.4	55.4
360.0	42.6	42.6	42.6	46.9	46.9	51.1	51.1	55.4	55.4	55.4

C\γ	170.0	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0
0.0	55.4	55.4	55.4	59.6	55.4	55.4	51.1	51.1	51.1	51.1
30.0	55.4	55.4	59.6	55.4	55.4	55.4	51.1	51.1	51.1	51.1
60.0	59.6	55.4	55.4	55.4	55.4	55.4	55.4	51.1	51.1	51.1
90.0	55.4	59.6	59.6	55.4	55.4	55.4	55.4	51.1	51.1	51.1
120.0	63.9	63.9	63.9	63.9	63.9	59.6	55.4	51.1	51.1	51.1
150.0	63.9	63.9	63.9	63.9	59.6	59.6	55.4	51.1	46.9	51.1
180.0	63.9	63.9	63.9	63.9	59.6	55.4	55.4	51.1	51.1	51.1
210.0	63.9	63.9	63.9	59.6	59.6	59.6	51.1	51.1	51.1	51.1
240.0	63.9	63.9	63.9	63.9	59.6	55.4	55.4	51.1	51.1	51.1
270.0	63.9	63.9	63.9	59.6	59.6	59.6	55.4	51.1	51.1	51.1
300.0	55.4	55.4	55.4	55.4	55.4	55.4	51.1	51.1	46.9	51.1
330.0	55.4	55.4	59.6	55.4	55.4	51.1	51.1	51.1	51.1	51.1
360.0	55.4	55.4	55.4	59.6	55.4	55.4	51.1	51.1	51.1	51.1

Intensity Data [cd]

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C\γ	180.0
0.0	51.1
30.0	51.1
60.0	51.1
90.0	51.1
120.0	51.1
150.0	51.1
180.0	51.1
210.0	51.1
240.0	51.1
270.0	51.1
300.0	51.1
330.0	51.1
360.0	51.1

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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	64179.68	0.00	0.00	0.00	0.00
1	62853.75	60.78	60.78	60.78	60.78
2	59494.64	175.61	236.39	175.61	236.39
3	53509.08	270.27	506.66	270.27	506.66
4	45433.07	331.19	837.85	331.19	837.85
5	36823.89	353.87	1191.72	353.87	1191.72
6	27573.63	338.43	1530.14	338.43	1530.14
7	20276.80	297.01	1827.15	297.01	1827.15
8	14465.17	248.64	2075.79	248.64	2075.79
9	10591.35	203.07	2278.86	203.07	2278.86
10	8017.79	168.41	2447.27	168.41	2447.27
11	6352.61	143.59	2590.86	102.86	2550.12
12	5140.02	125.63	2716.49	24.43	2574.55
13	4324.29	112.32	2828.80	0.00	2574.55
14	3738.94	103.21	2932.01	0.00	2574.55
15	3282.44	96.39	3028.41	0.00	2574.55
16	2966.16	91.56	3119.96	0.00	2574.55
17	2729.75	88.70	3208.67	0.00	2574.55
18	2558.30	87.19	3295.85	0.00	2574.55
19	2418.08	86.58	3382.43	0.00	2574.55
20	2298.81	86.33	3468.76	0.00	2574.55
21	2211.13	86.60	3555.36	0.00	2574.55
22	2131.62	87.27	3642.63	0.00	2574.55
23	2056.36	87.88	3730.51	0.00	2574.55
24	1991.76	88.51	3819.01	0.00	2574.55
25	1937.80	89.35	3908.36	0.00	2574.55
26	1876.39	90.03	3998.40	0.00	2574.55
27	1821.72	90.48	4088.87	0.00	2574.55
28	1770.61	90.95	4179.82	0.00	2574.55
29	1721.98	91.38	4271.20	0.00	2574.55
30	1668.02	91.53	4362.73	0.00	2574.55
31	1554.43	89.68	4452.41	0.00	2574.55
32	1383.69	84.17	4536.58	0.00	2574.55
33	1138.76	74.31	4610.89	0.00	2574.55
34	850.52	60.20	4671.09	0.00	2574.55
35	589.97	44.74	4715.83	0.00	2574.55
36	366.69	30.46	4746.29	0.00	2574.55
37	194.17	18.29	4764.58	0.00	2574.55
38	120.34	10.50	4775.08	0.00	2574.55
39	91.23	7.22	4782.30	0.00	2574.55
40	75.96	5.83	4788.13	0.00	2574.55

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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]
41	66.38	5.07	4793.20	0.00	2574.55
42	58.93	4.55	4797.75	0.00	2574.55
43	52.54	4.13	4801.88	0.00	2574.55
44	49.70	3.86	4805.74	0.00	2574.55
45	45.79	3.67	4809.41	0.00	2574.55
46	41.89	3.43	4812.84	0.00	2574.55
47	37.27	3.15	4815.99	0.00	2574.55
48	35.85	2.96	4818.95	0.00	2574.55
49	34.43	2.89	4821.83	0.00	2574.55
50	32.66	2.80	4824.63	0.00	2574.55
51	31.95	2.73	4827.37	0.00	2574.55
52	30.53	2.68	4830.05	0.00	2574.55
53	30.17	2.64	4832.69	0.00	2574.55
54	30.88	2.69	4835.38	0.00	2574.55
55	30.53	2.74	4838.12	0.00	2574.55
56	30.88	2.77	4840.90	0.00	2574.55
57	30.53	2.81	4843.70	0.00	2574.55
58	31.59	2.87	4846.58	0.00	2574.55
59	33.37	3.04	4849.61	0.00	2574.55
60	35.14	3.24	4852.85	0.00	2574.55
61	35.14	3.35	4856.20	0.00	2574.55
62	33.01	3.28	4859.49	0.00	2574.55
63	29.46	3.04	4862.53	0.00	2574.55
64	26.98	2.77	4865.30	0.00	2574.55
65	23.78	2.51	4867.81	0.00	2574.55
66	22.36	2.30	4870.11	0.00	2574.55
67	21.30	2.20	4872.31	0.00	2574.55
68	19.17	2.05	4874.36	0.00	2574.55
69	18.10	1.90	4876.26	0.00	2574.55
70	17.75	1.84	4878.10	0.00	2574.55
71	16.68	1.78	4879.88	0.00	2574.55
72	15.97	1.70	4881.58	0.00	2574.55
73	15.97	1.67	4883.25	0.00	2574.55
74	14.91	1.62	4884.88	0.00	2574.55
75	12.42	1.44	4886.32	0.00	2574.55
76	10.65	1.22	4887.55	0.00	2574.55
77	7.81	0.98	4888.53	0.00	2574.55
78	6.39	0.76	4889.29	0.00	2574.55
79	4.26	0.57	4889.86	0.00	2574.55
80	3.90	0.44	4890.30	0.00	2574.55
81	3.55	0.40	4890.71	0.00	2574.55

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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]
82	1.77	0.29	4890.99	0.00	2574.55
83	0.71	0.14	4891.13	0.00	2574.55
84	0.00	0.04	4891.17	0.00	2574.55
85	0.00	0.00	4891.17	0.00	2574.55
86	0.71	0.04	4891.21	0.00	2574.55
87	0.71	0.08	4891.28	0.00	2574.55
88	0.00	0.04	4891.32	0.00	2574.55
89	0.00	0.00	4891.32	0.00	2574.55
90	0.00	0.00	4891.32	0.00	2574.55
91	0.00	0.00	4891.32	0.00	2574.55
92	0.00	0.00	4891.32	0.00	2574.55
93	0.00	0.00	4891.32	0.00	2574.55
94	0.00	0.00	4891.32	0.00	2574.55
95	0.00	0.00	4891.32	0.00	2574.55
96	0.00	0.00	4891.32	0.00	2574.55
97	0.00	0.00	4891.32	0.00	2574.55
98	0.00	0.00	4891.32	0.00	2574.55
99	0.00	0.00	4891.32	0.00	2574.55
100	0.00	0.00	4891.32	0.00	2574.55
101	0.00	0.00	4891.32	0.00	2574.55
102	0.00	0.00	4891.32	0.00	2574.55
103	0.00	0.00	4891.32	0.00	2574.55
104	0.00	0.00	4891.32	0.00	2574.55
105	0.00	0.00	4891.32	0.00	2574.55
106	0.00	0.00	4891.32	0.00	2574.55
107	0.00	0.00	4891.32	0.00	2574.55
108	0.00	0.00	4891.32	0.00	2574.55
109	0.00	0.00	4891.32	0.00	2574.55
110	0.00	0.00	4891.32	0.00	2574.55
111	0.00	0.00	4891.32	0.00	2574.55
112	0.00	0.00	4891.32	0.00	2574.55
113	0.00	0.00	4891.32	0.00	2574.55
114	0.00	0.00	4891.32	0.00	2574.55
115	0.00	0.00	4891.32	0.00	2574.55
116	0.00	0.00	4891.32	0.00	2574.55
117	0.00	0.00	4891.32	0.00	2574.55
118	0.00	0.00	4891.32	0.00	2574.55
119	0.00	0.00	4891.32	0.00	2574.55
120	0.00	0.00	4891.32	0.00	2574.55
121	0.00	0.00	4891.32	0.00	2574.55
122	0.00	0.00	4891.32	0.00	2574.55

R854 WNL (CRI90 1400mA 12D)

Zonal flux distribution table

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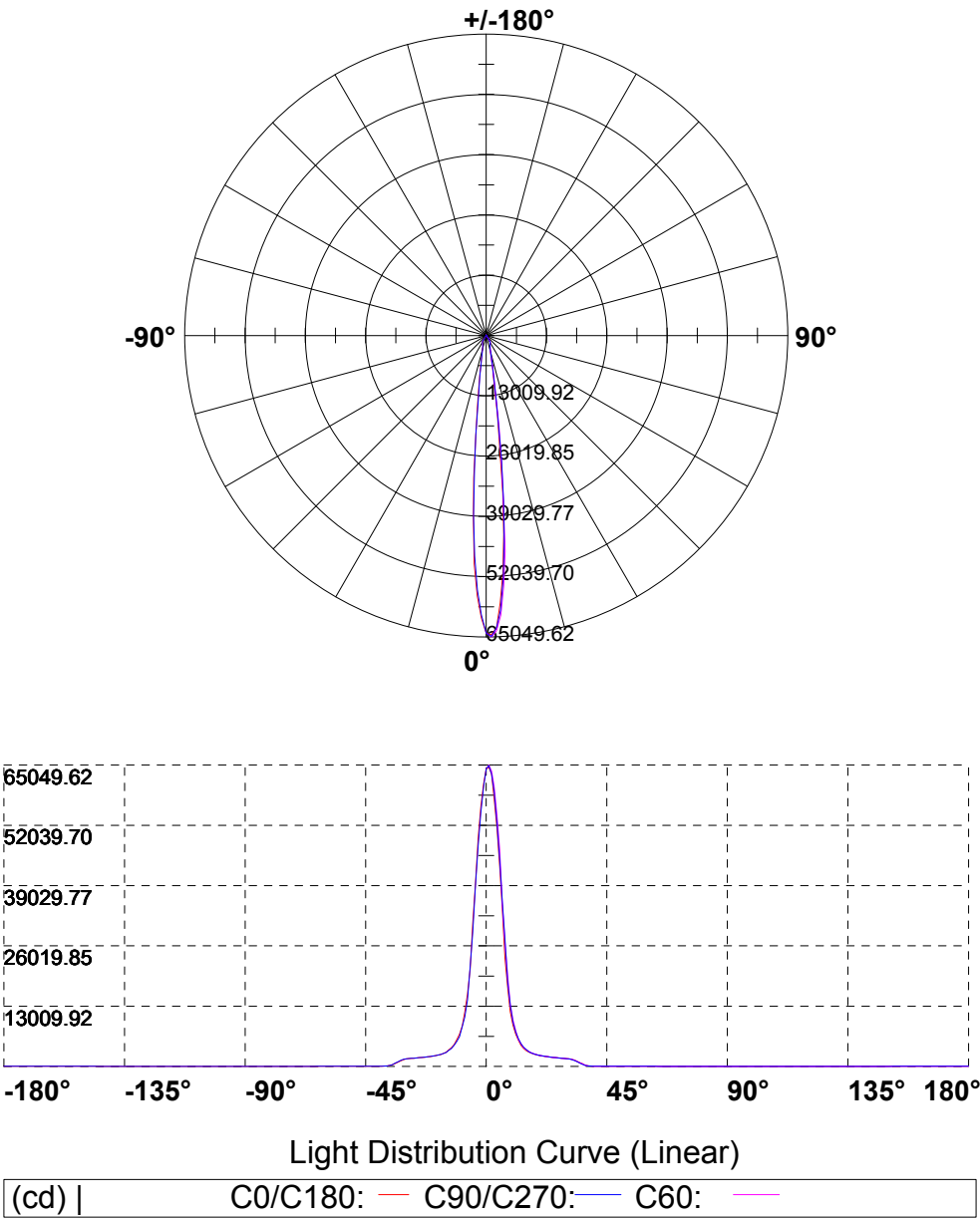
Gamma [°]	Average I [cd]	Zonal Flux [lm]	Sum Flux [lm]	Effective Flux [lm]	Effective Sum [lm]
123	0.00	0.00	4891.32	0.00	2574.55
124	0.00	0.00	4891.32	0.00	2574.55
125	0.00	0.00	4891.32	0.00	2574.55
126	0.00	0.00	4891.32	0.00	2574.55
127	0.00	0.00	4891.32	0.00	2574.55
128	0.35	0.02	4891.34	0.00	2574.55
129	0.35	0.03	4891.37	0.00	2574.55
130	0.35	0.03	4891.40	0.00	2574.55
131	1.42	0.07	4891.47	0.00	2574.55
132	1.42	0.12	4891.59	0.00	2574.55
133	2.13	0.14	4891.73	0.00	2574.55
134	2.84	0.20	4891.93	0.00	2574.55
135	3.19	0.24	4892.17	0.00	2574.55
136	3.19	0.25	4892.41	0.00	2574.55
137	3.90	0.27	4892.68	0.00	2574.55
138	5.68	0.36	4893.04	0.00	2574.55
139	6.03	0.43	4893.46	0.00	2574.55
140	6.74	0.46	4893.92	0.00	2574.55
141	8.87	0.54	4894.46	0.00	2574.55
142	12.42	0.73	4895.19	0.00	2574.55
143	13.84	0.88	4896.07	0.00	2574.55
144	16.33	0.98	4897.05	0.00	2574.55
145	19.17	1.13	4898.18	0.00	2574.55
146	21.65	1.27	4899.45	0.00	2574.55
147	24.49	1.40	4900.85	0.00	2574.55
148	27.33	1.53	4902.37	0.00	2574.55
149	29.46	1.63	4904.00	0.00	2574.55
150	31.59	1.70	4905.70	0.00	2574.55
151	33.01	1.74	4907.44	0.00	2574.55
152	35.85	1.80	4909.25	0.00	2574.55
153	36.21	1.82	4911.07	0.00	2574.55
154	38.34	1.82	4912.90	0.00	2574.55
155	39.05	1.83	4914.72	0.00	2574.55
156	40.82	1.82	4916.54	0.00	2574.55
157	43.31	1.84	4918.38	0.00	2574.55
158	44.02	1.83	4920.21	0.00	2574.55
159	45.44	1.80	4922.01	0.00	2574.55
160	47.57	1.79	4923.79	0.00	2574.55
161	48.28	1.75	4925.55	0.00	2574.55
162	50.41	1.72	4927.26	0.00	2574.55
163	52.18	1.69	4928.96	0.00	2574.55

R854 WNL (CRI90 1400mA 12D)

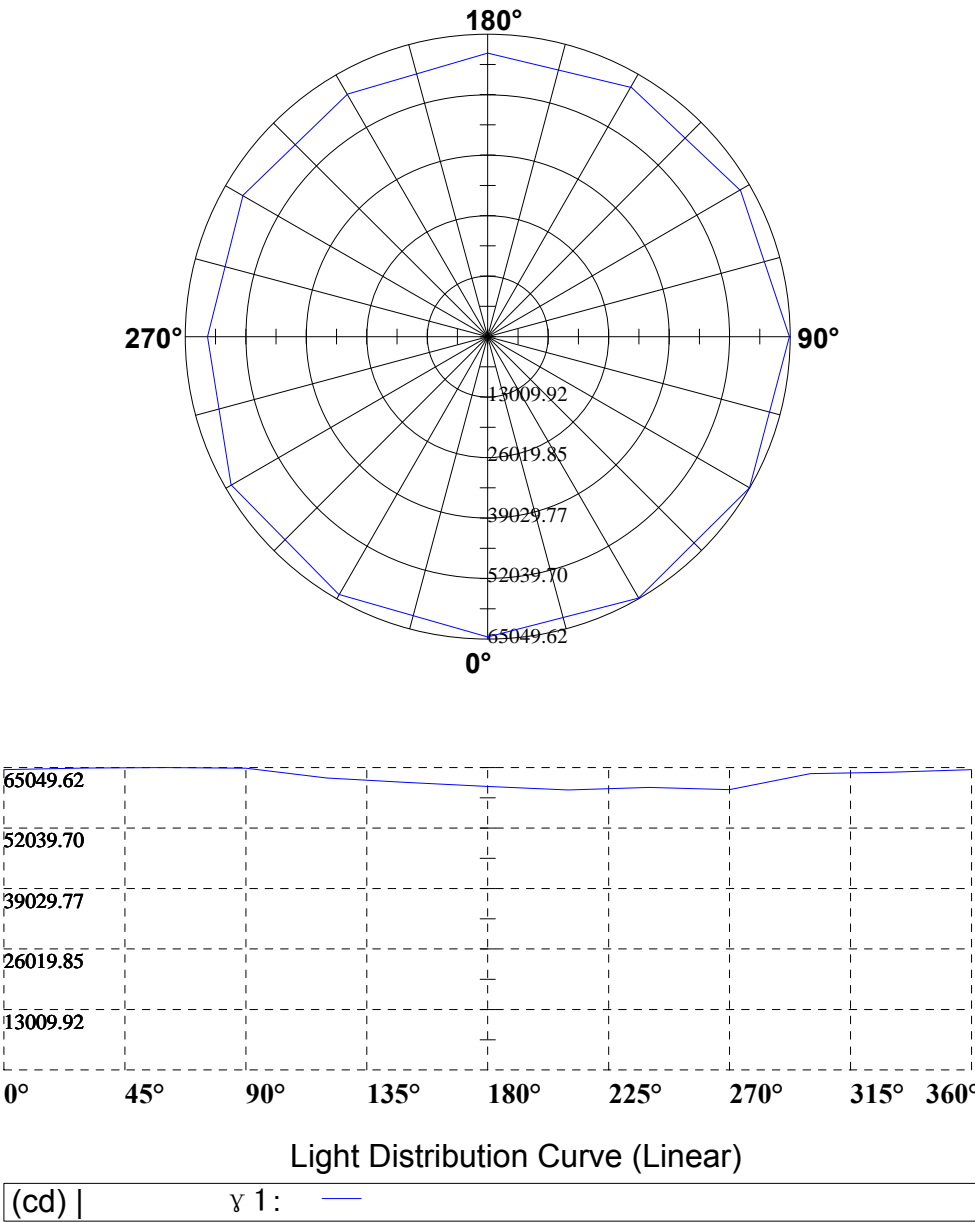
Zonal flux distribution table

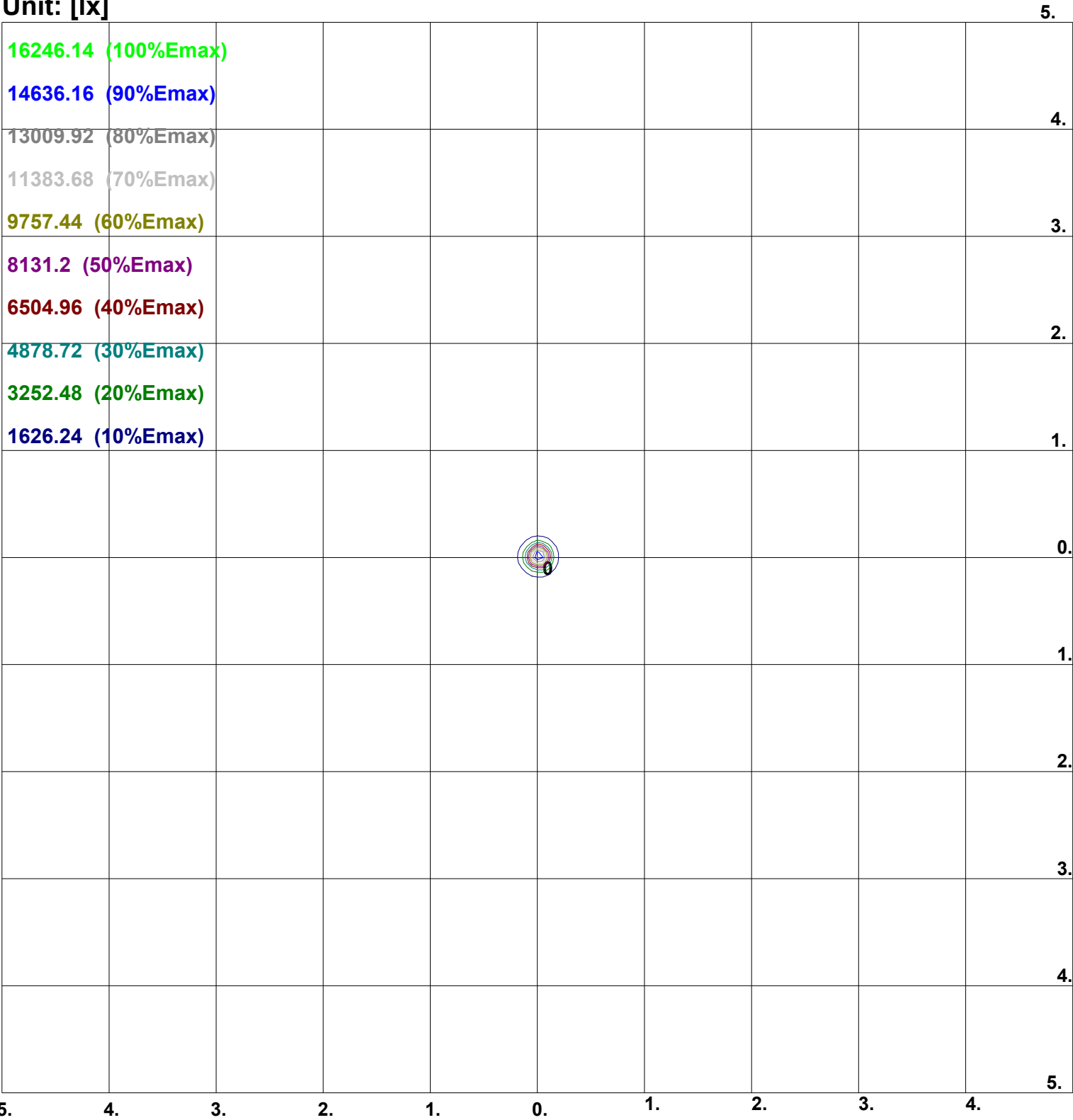
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[illegible]



Horizontal cone through Max.cd [Unit: cd]





Coordinate Scale: d/h
Height: 2 m
Max Illuminance : 16262.41lx

Luminance Limiting Curve (There is not luminous side)

Diameter: 140mm

Length: -140mm

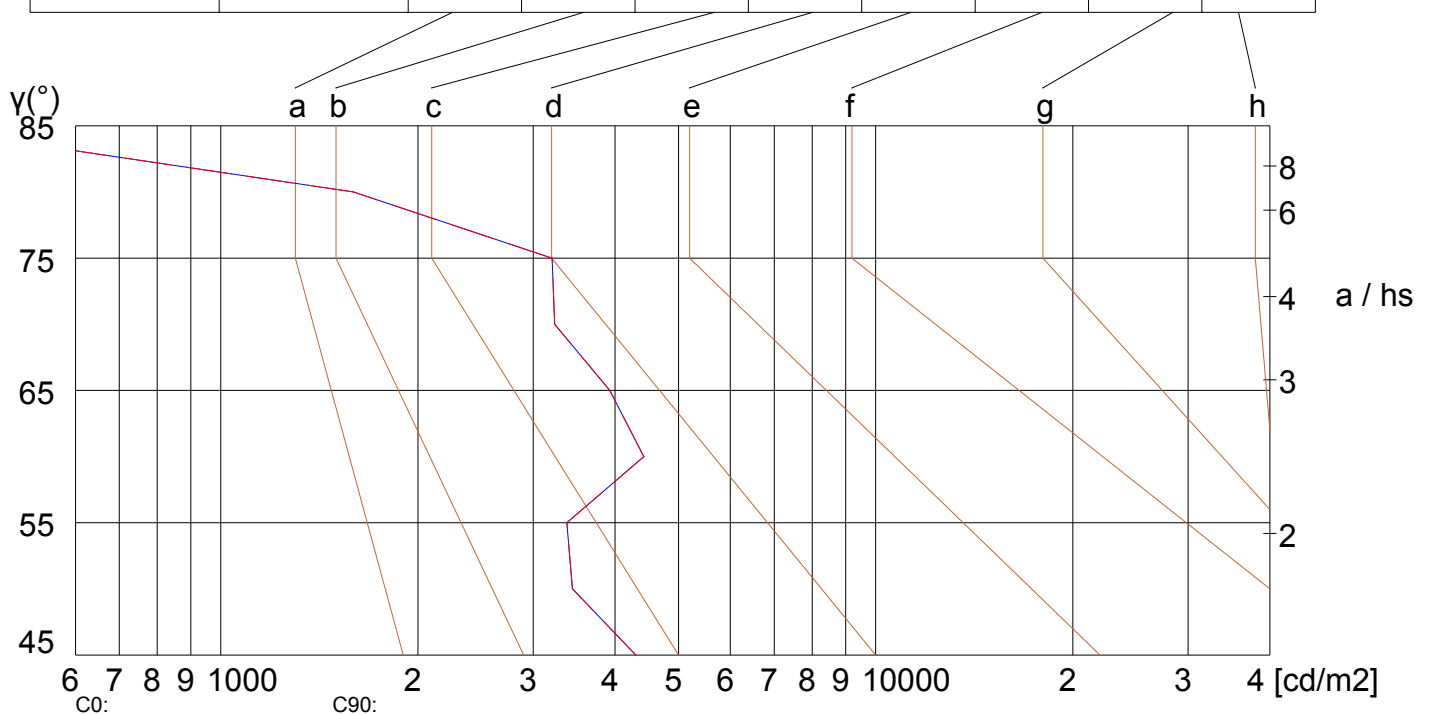
Width: -140mm

Height: 100mm

(cd/m²)

γ	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	4303	3443	3376	4426	3927	3235	3206	1593	
C90	4303	3443	3376	4426	3927	3235	3206	1593	

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 12D)

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	COEFFICIENTS OF UTILIZATION FOR RHOFC=20															
0	1.04	1.04	1.04	1.02	1.02	1.02	0.98	0.98	0.98	0.93	0.93	0.93	0.90	0.90	0.90	0.88
1	1.03	1.02	1.02	1.01	1.01	1.00	0.97	0.96	0.96	0.92	0.91	0.91	0.86	0.85	0.84	0.80
2	0.99	0.99	0.98	0.98	0.97	0.96	0.94	0.93	0.92	0.89	0.88	0.87	0.84	0.82	0.81	0.77
3	0.96	0.95	0.95	0.94	0.93	0.93	0.91	0.89	0.88	0.87	0.85	0.84	0.82	0.80	0.78	0.74
4	0.93	0.92	0.92	0.91	0.90	0.90	0.88	0.87	0.85	0.84	0.82	0.81	0.80	0.78	0.76	0.72
5	0.90	0.90	0.89	0.89	0.88	0.87	0.86	0.84	0.83	0.82	0.80	0.78	0.78	0.75	0.73	0.70
6	0.88	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.80	0.80	0.78	0.76	0.76	0.73	0.71	0.68
7	0.86	0.85	0.84	0.84	0.83	0.82	0.81	0.79	0.78	0.78	0.76	0.74	0.74	0.72	0.70	0.66
8	0.83	0.83	0.82	0.82	0.81	0.80	0.79	0.77	0.76	0.76	0.74	0.72	0.73	0.70	0.68	0.65
9	0.82	0.81	0.80	0.80	0.79	0.78	0.77	0.76	0.74	0.74	0.72	0.70	0.71	0.68	0.66	0.63
10	0.80	0.79	0.79	0.78	0.77	0.77	0.76	0.74	0.73	0.73	0.70	0.69	0.70	0.67	0.65	0.62

