

R854 WNL (CRI90 1050mA 40D)

Luminaire Name: R854 WNL (CRI90 1050mA 40D)

Report NO.: 01313217031104A

Test NO.:

Lamp: CITIZEN CLU038-1208C4-403H5M3 1050mA

Sum Lumens: 4462 lm

Number of Lamps: 1

Diameter: 140mm

Length: -140mm

Photometric Type: Type C

Voltage: 230.5 V

Current: 0.1864 A

Power: 41.555 W

Power Factor: 0.9671

Ballast Type: PHILIPS XITANIUM 44W 0.9 1.05A 42 I 230V

Width: -140mm

Height: 100mm

Optical Component: 40D Reflector DC(V:36.09V I:1.015A P:38.21W)

Photometric Results

Lumens: 3921.47 lm

Efficiency: 87.89%

Central Intensity: 6878.734cd

Maximum Intensity: 7425.055cd

Beam Angle(10%): Left: -41.5 Right:26.9

Maximum s/h: C0_180: 0.37 C90_270: 0.37

Effective Luminous Flux: 3680.77 lm

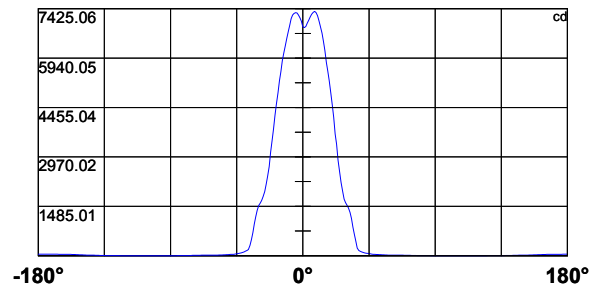
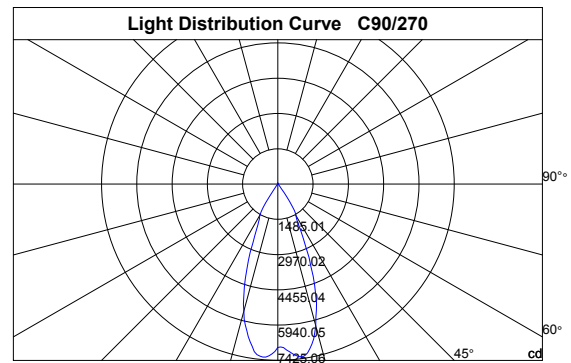
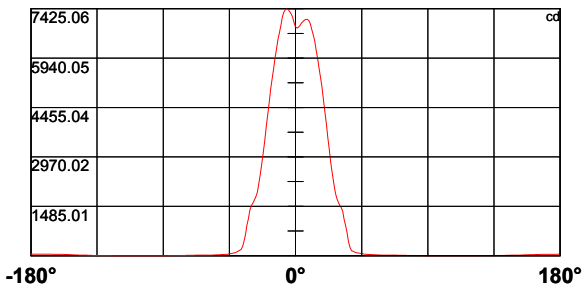
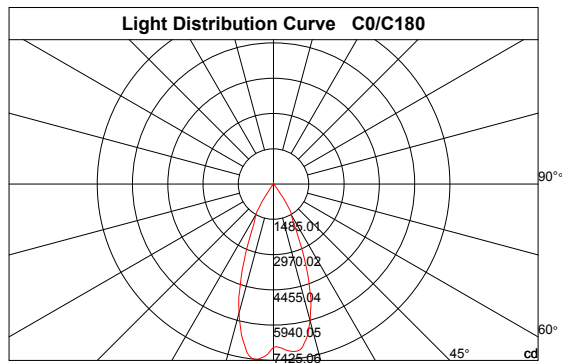
Angle of maximum intensity: C:150.0 G:7.0

Half Peak Side Angle(50%): Left: -28.4 Right:13.9

Up Flux Rate: 0.94%

Down Flux Rate: 86.95%

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	6878.7	6842.8	6876.4	6922.4	6991.4	7035.7	7078.7	7101.7	7103.0	7069.8
30.0	6878.7	6823.2	6827.8	6872.1	6943.7	7040.8	7096.6	7127.3	7145.2	7114.9
60.0	6878.7	6827.8	6836.8	6902.4	6995.3	7071.1	7152.9	7197.2	7215.5	7183.5
90.0	6878.7	6858.1	6889.6	6996.5	7077.9	7174.6	7258.9	7315.6	7342.4	7304.5
120.0	6878.7	6877.3	6991.4	7087.7	7165.2	7262.3	7322.8	7368.8	7345.8	7272.6
150.0	6878.7	6969.3	7096.2	7200.6	7286.2	7374.8	7415.3	7425.1	7368.4	7238.9
180.0	6878.7	7005.5	7171.2	7269.1	7335.2	7396.9	7417.0	7394.0	7316.0	7178.4
210.0	6878.7	7080.9	7204.0	7268.3	7327.1	7352.2	7341.1	7278.5	7180.1	7030.6
240.0	6878.7	7073.6	7191.2	7268.3	7305.8	7318.1	7295.1	7194.2	7099.6	6937.3
270.0	6878.7	7050.6	7150.7	7235.9	7297.7	7307.1	7278.9	7232.5	7123.0	6917.3
300.0	6878.7	6909.6	7028.9	7102.6	7161.4	7171.2	7145.6	7110.3	7029.8	6922.4
330.0	6878.7	6886.2	6945.4	7012.7	7054.0	7091.1	7081.7	7067.7	7027.2	6951.4
360.0	6878.7	6842.8	6876.4	6922.4	6991.4	7035.7	7078.7	7101.7	7103.0	7069.8

C\γ	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
0.0	6983.3	6810.0	6658.3	6456.0	6182.5	5939.7	5638.5	5372.3	5086.1	4667.8
30.0	7046.8	6933.1	6735.8	6542.9	6321.8	6043.6	5800.8	5453.7	5152.5	4825.4
60.0	7099.6	6971.0	6800.2	6575.7	6363.5	6131.8	5825.1	5575.9	5290.5	4973.2
90.0	7216.8	7060.4	6887.1	6691.5	6440.6	6167.2	5813.6	5549.9	5261.6	4885.9
120.0	7130.3	6974.8	6786.5	6551.0	6323.5	5983.6	5721.2	5444.7	5145.3	4701.4
150.0	7051.9	6870.0	6700.5	6396.8	6147.1	5892.8	5566.6	5269.2	4836.0	4485.9
180.0	6928.8	6716.2	6490.1	6199.5	5930.8	5608.3	5316.9	5011.1	4568.5	4217.1
210.0	6771.2	6552.7	6287.7	6058.1	5800.0	5484.8	5188.3	4872.2	4422.4	4071.8
240.0	6678.8	6470.0	6256.6	6001.0	5763.8	5423.4	5146.1	4839.0	4448.0	4106.3
270.0	6733.3	6537.3	6295.0	6087.5	5859.2	5531.6	5256.4	4894.0	4555.7	4214.5
300.0	6734.6	6574.4	6390.4	6166.7	5961.4	5658.1	5443.0	5163.2	4749.5	4411.8
330.0	6842.3	6650.6	6476.8	6297.5	6059.8	5848.5	5568.3	5305.4	5016.2	4583.8
360.0	6983.3	6810.0	6658.3	6456.0	6182.5	5939.7	5638.5	5372.3	5086.1	4667.8

C\γ	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
0.0	4312.9	3960.7	3546.2	3198.6	2802.0	2474.4	2184.4	1889.6	1723.5	1612.7
30.0	4404.1	4029.7	3657.8	3236.9	2886.4	2434.4	2137.5	1904.1	1706.4	1604.6
60.0	4486.3	4097.4	3709.3	3271.4	2911.1	2444.6	2181.0	1930.5	1706.4	1605.0
90.0	4533.2	4160.0	3658.2	3351.1	2875.3	2520.5	2198.4	1932.6	1702.2	1595.7
120.0	4346.2	3969.2	3530.4	3169.2	2817.4	2424.6	2141.8	1842.3	1708.6	1612.7
150.0	4121.7	3686.8	3323.0	2978.8	2598.8	2307.9	2063.4	1816.3	1697.1	1602.9
180.0	3867.4	3455.0	3113.4	2790.5	2439.1	2177.6	1905.8	1765.2	1669.4	1577.8
210.0	3724.7	3330.6	3001.4	2690.0	2354.3	2111.1	1859.8	1734.1	1645.9	1562.0
240.0	3757.5	3355.8	3019.7	2697.7	2316.4	2077.4	1864.0	1726.0	1636.6	1553.1
270.0	3806.5	3458.0	3112.6	2675.5	2385.4	2141.8	1927.9	1778.4	1662.6	1583.3
300.0	4069.7	3668.9	3331.5	2998.8	2578.4	2303.6	2048.9	1876.4	1738.0	1623.8
330.0	4236.3	3892.5	3489.1	3149.6	2706.6	2451.9	2187.3	1922.0	1763.1	1649.8
360.0	4312.9	3960.7	3546.2	3198.6	2802.0	2474.4	2184.4	1889.6	1723.5	1612.7

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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	1518.6	1450.0	1333.3	1083.7	907.7	695.6	424.7	257.7	152.5	129.5
30.0	1528.4	1454.7	1335.0	1162.0	880.5	668.3	463.9	268.8	167.0	130.3
60.0	1527.9	1453.4	1328.6	1146.7	866.0	653.0	422.6	258.6	166.1	135.0
90.0	1517.7	1435.5	1300.5	1116.5	862.6	643.2	439.2	226.2	155.1	129.9
120.0	1535.6	1405.3	1234.9	941.0	702.8	518.4	286.7	188.3	154.2	129.1
150.0	1510.1	1384.8	1164.2	943.9	715.6	436.6	278.6	191.3	157.6	134.6
180.0	1506.2	1373.7	1115.2	932.0	642.8	443.0	280.3	184.0	159.3	135.5
210.0	1488.8	1352.0	1136.1	918.0	627.0	431.9	276.5	175.5	151.6	129.9
240.0	1484.5	1364.0	1112.2	897.5	644.5	445.1	279.0	169.5	144.8	124.4
270.0	1513.9	1361.0	1172.3	954.6	693.1	484.3	310.1	185.7	155.5	133.8
300.0	1546.7	1474.7	1295.4	1095.2	865.1	593.8	387.2	244.9	161.0	140.1
330.0	1546.7	1470.0	1345.6	1094.3	872.0	610.4	407.2	250.5	157.6	135.9
360.0	1518.6	1450.0	1333.3	1083.7	907.7	695.6	424.7	257.7	152.5	129.5

C\γ	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0
0.0	110.8	94.1	84.8	77.1	69.4	62.6	54.1	47.7	43.9	40.5
30.0	111.2	100.5	86.0	77.5	70.3	62.2	55.4	46.9	43.4	40.0
60.0	114.2	102.2	84.3	77.1	70.3	62.2	55.4	47.7	44.3	40.9
90.0	112.0	98.8	83.5	76.7	70.7	61.8	54.9	48.6	43.9	40.5
120.0	111.6	92.9	85.2	77.1	68.2	60.1	52.0	46.9	42.6	39.6
150.0	112.0	98.8	85.6	76.7	66.5	58.8	50.3	46.0	42.6	38.3
180.0	114.6	91.6	82.2	72.4	63.9	56.2	48.6	44.3	40.9	36.6
210.0	109.9	90.3	80.5	70.7	62.2	54.1	47.3	43.0	40.0	36.2
240.0	102.7	89.9	80.9	71.1	62.6	54.9	46.9	43.4	39.2	36.2
270.0	111.6	97.5	82.2	73.7	65.2	55.8	49.0	44.3	40.0	37.1
300.0	115.9	104.8	86.9	77.1	69.4	61.8	53.2	47.7	43.9	39.2
330.0	117.6	100.1	87.3	78.0	70.7	63.5	54.5	48.6	44.7	40.0
360.0	110.8	94.1	84.8	77.1	69.4	62.6	54.1	47.7	43.9	40.5

C\γ	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
0.0	36.6	33.7	31.5	29.4	27.3	25.1	23.9	22.2	20.4	20.0
30.0	36.6	34.1	31.5	29.0	27.3	25.1	23.4	21.7	20.4	20.0
60.0	37.1	34.1	31.9	29.4	27.3	25.6	23.4	22.2	20.4	20.0
90.0	36.6	33.7	31.5	29.0	26.8	24.7	22.6	21.3	20.4	19.6
120.0	35.4	32.8	30.7	28.1	26.0	23.9	22.2	20.9	20.0	19.2
150.0	35.8	32.8	29.8	27.7	25.6	23.9	22.2	20.4	20.0	19.2
180.0	34.1	31.1	28.5	26.8	24.7	23.0	21.7	20.4	20.0	19.2
210.0	33.2	30.7	28.5	26.4	24.7	23.0	21.7	20.4	20.0	19.2
240.0	33.7	31.1	29.0	26.4	24.7	23.0	21.7	20.4	20.4	19.6
270.0	34.1	31.5	29.4	26.8	25.1	23.4	22.2	20.9	20.0	19.6
300.0	36.6	33.2	30.7	28.5	26.4	24.7	23.0	21.3	20.4	20.0
330.0	37.1	34.1	31.5	29.4	27.3	25.1	23.4	21.7	20.4	20.4
360.0	36.6	33.7	31.5	29.4	27.3	25.1	23.9	22.2	20.4	20.0

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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	19.6	18.7	17.9	17.0	16.6	16.2	15.3	14.5	13.6	12.8
30.0	19.2	18.7	17.9	17.0	16.2	15.8	14.9	14.5	13.6	12.8
60.0	18.7	17.9	17.5	16.6	15.8	15.8	14.9	14.1	13.2	12.4
90.0	18.7	17.5	17.0	16.2	15.8	15.3	14.5	13.6	12.8	11.9
120.0	18.3	17.5	16.6	16.2	15.8	14.9	14.1	13.2	12.4	11.5
150.0	18.3	17.5	16.6	16.2	15.8	14.9	14.1	13.6	12.8	11.9
180.0	18.3	17.9	17.0	16.6	16.6	15.3	14.9	14.1	13.2	12.4
210.0	18.7	18.3	17.5	17.5	16.6	15.3	14.9	14.1	13.6	12.8
240.0	18.7	18.7	17.9	17.5	17.0	15.8	15.3	14.5	14.1	13.2
270.0	19.2	17.9	17.9	17.5	17.0	16.2	15.3	14.5	13.6	13.2
300.0	19.2	18.3	17.5	17.0	16.6	15.8	15.3	14.5	13.6	13.2
330.0	19.6	18.7	17.9	17.0	17.0	16.2	15.3	14.5	13.6	13.2
360.0	19.6	18.7	17.9	17.0	16.6	16.2	15.3	14.5	13.6	12.8

C\γ	70.0	71.0	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0
0.0	12.4	11.9	11.1	10.6	9.8	8.9	8.5	6.8	4.7	2.6
30.0	11.9	11.5	10.6	10.2	9.8	8.5	8.1	6.8	4.7	2.6
60.0	11.5	11.1	10.2	9.8	8.9	8.5	7.7	6.4	4.7	2.6
90.0	11.1	10.6	9.8	9.4	8.5	8.1	7.2	6.0	4.3	2.6
120.0	11.1	10.2	9.8	8.9	8.5	7.7	6.4	4.7	3.0	2.1
150.0	11.5	10.6	10.2	9.4	8.9	8.1	6.4	4.7	2.6	2.1
180.0	11.9	11.1	10.6	9.8	9.4	8.5	6.4	4.7	2.6	2.1
210.0	12.4	11.5	11.1	10.2	9.8	8.5	6.4	3.8	2.1	1.7
240.0	12.4	11.9	11.1	10.6	9.8	8.9	6.8	4.3	2.1	2.1
270.0	12.4	11.9	11.5	10.6	9.8	8.9	6.4	4.3	2.1	2.1
300.0	12.4	11.9	11.1	10.6	9.8	9.4	7.7	5.5	3.8	2.1
330.0	12.4	11.9	11.1	10.6	9.8	8.9	8.1	6.0	4.3	2.1
360.0	12.4	11.9	11.1	10.6	9.8	8.9	8.5	6.8	4.7	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	1.7	1.7	1.7	1.3	1.3	0.9	0.9	0.4	0.4	0.4
30.0	2.1	1.7	1.7	1.7	1.3	1.3	0.9	0.9	0.4	0.4
60.0	2.1	1.7	1.7	1.3	1.3	1.3	0.9	0.9	0.4	0.4
90.0	2.1	1.7	1.7	1.3	1.3	1.3	0.9	0.4	0.4	0.4
120.0	2.1	1.7	1.7	1.3	0.9	0.9	0.4	0.4	0.4	0.4
150.0	1.7	1.7	1.3	1.3	0.9	0.9	0.9	0.9	0.4	0.4
180.0	1.7	1.7	1.3	1.3	1.3	0.9	0.9	0.4	0.4	0.4
210.0	1.7	1.3	1.3	1.3	0.9	0.9	0.4	0.9	0.4	0.4
240.0	1.7	1.7	1.3	1.3	0.9	0.9	0.4	0.4	0.4	0.4
270.0	1.7	1.3	1.3	1.3	0.9	0.9	0.4	0.4	0.4	0.0
300.0	1.7	1.7	1.3	1.3	0.9	0.9	0.9	0.9	0.4	0.4
330.0	2.1	1.7	1.3	1.3	1.3	0.9	0.9	0.9	0.4	0.4
360.0	1.7	1.7	1.7	1.3	1.3	0.9	0.9	0.4	0.4	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	0.0	0.4	0.4	0.4	0.4	0.4	0.4
30.0	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
60.0	0.0	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.0	0.4
90.0	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.4	0.4	0.4
120.0	0.4	0.0	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.0
150.0	0.4	0.4	0.4	0.4	0.0	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	0.0	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	0.0	0.4	0.4	0.0	0.4	0.4	0.4	0.0
300.0	0.4	0.0	0.4	0.0	0.4	0.0	0.4	0.0	0.0	0.0
330.0	0.4	0.4	0.4	0.0	0.0	0.4	0.0	0.4	0.0	0.4
360.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	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	0.0	0.4	0.4	0.4	0.4
30.0	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4
60.0	0.4	0.0	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4
90.0	0.0	0.4	0.4	0.0	0.0	0.4	0.4	0.4	0.4	0.4
120.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
150.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4
180.0	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4
210.0	0.4	0.4	0.4	0.4	0.0	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	0.0	0.4	0.0	0.4	0.0	0.4
300.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
330.0	0.4	0.0	0.4	0.4	0.4	0.4	0.0	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

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	0.4	0.4	0.4	0.4	0.4
30.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
120.0	0.4	0.0	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	0.0	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	0.4	0.4	0.4	0.4	0.4

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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	0.4	0.9	0.9	0.9
30.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9
60.0	0.4	0.4	0.4	0.4	0.4	0.9	0.4	0.9	0.9	0.9
90.0	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9	1.3
120.0	0.4	0.4	0.4	0.4	0.4	0.4	0.9	1.3	1.3	1.7
150.0	0.4	0.4	0.4	0.4	0.9	0.9	0.9	1.3	1.3	1.7
180.0	0.4	0.4	0.4	0.4	0.4	0.9	0.9	1.3	1.3	1.7
210.0	0.4	0.4	0.4	0.4	0.4	0.9	0.9	1.3	1.3	1.7
240.0	0.4	0.4	0.4	0.4	0.9	0.9	0.9	1.3	1.3	1.7
270.0	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9	1.7	1.7
300.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9
330.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9
360.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.9	0.9	0.9

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	1.3	1.7	2.1	2.6	3.0	3.4	4.3	4.7	5.5
30.0	1.3	1.3	1.7	1.7	2.6	3.0	3.4	3.8	4.7	5.5
60.0	1.3	1.3	1.7	2.1	2.1	3.0	3.4	3.8	4.7	5.1
90.0	1.3	1.3	1.7	2.1	2.6	3.0	3.4	3.8	4.7	5.5
120.0	2.1	2.1	2.6	3.4	4.3	4.7	5.5	6.8	7.7	8.5
150.0	2.1	2.6	3.0	3.4	4.3	4.7	5.5	6.8	7.2	8.9
180.0	2.1	2.6	3.0	3.4	4.3	5.1	6.0	6.8	7.7	8.9
210.0	2.1	2.6	3.0	3.4	4.3	4.7	6.0	6.8	8.1	8.9
240.0	2.1	2.6	3.0	3.4	4.3	5.1	6.0	6.8	7.7	9.4
270.0	2.1	2.6	3.4	3.4	4.3	5.1	6.0	6.8	8.1	8.9
300.0	1.3	1.7	1.7	2.1	2.6	3.4	3.8	4.3	5.1	6.0
330.0	1.3	1.3	1.7	2.1	2.6	3.0	3.8	4.3	5.1	6.0
360.0	1.3	1.3	1.7	2.1	2.6	3.0	3.4	4.3	4.7	5.5

C\γ	140.0	141.0	142.0	143.0	144.0	145.0	146.0	147.0	148.0	149.0
0.0	6.4	7.2	8.1	8.9	9.8	11.1	11.9	13.2	14.5	15.8
30.0	6.4	6.8	7.7	8.9	9.8	10.6	12.4	13.2	14.5	15.3
60.0	6.4	7.2	8.1	8.9	9.8	10.6	11.9	13.2	14.1	15.8
90.0	6.4	7.2	8.1	8.9	9.8	11.1	12.4	13.2	14.1	15.8
120.0	9.8	11.1	12.4	13.6	14.9	16.6	18.3	19.6	20.9	22.2
150.0	10.2	11.1	12.8	14.1	15.3	17.0	18.7	20.0	21.3	22.6
180.0	10.2	11.1	12.8	14.1	15.3	17.5	19.2	20.0	21.3	23.0
210.0	10.2	11.5	12.8	14.1	15.8	17.5	18.7	20.4	21.3	23.4
240.0	10.2	11.5	12.8	14.5	16.2	17.9	19.2	20.4	21.7	23.0
270.0	10.2	11.5	12.8	14.1	16.2	17.5	19.2	20.4	21.3	23.0
300.0	6.8	7.7	8.5	9.4	10.6	11.5	12.8	14.1	14.9	16.2
330.0	6.4	7.2	8.5	9.4	10.2	11.5	12.8	14.1	14.9	16.2
360.0	6.4	7.2	8.1	8.9	9.8	11.1	11.9	13.2	14.5	15.8

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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	17.0	18.3	19.6	20.4	21.7	23.0	24.7	26.0	27.3	29.0
30.0	16.6	18.3	19.6	20.4	21.7	23.0	24.3	26.0	27.3	28.5
60.0	16.6	18.3	19.6	20.4	21.7	23.0	24.3	26.0	27.3	28.5
90.0	17.0	18.3	19.6	20.4	21.7	23.0	24.3	26.4	27.3	28.5
120.0	23.9	25.6	27.3	29.0	30.7	32.4	33.7	35.4	36.6	38.3
150.0	24.3	26.0	27.7	29.4	30.7	32.4	34.1	35.8	37.1	38.3
180.0	24.3	26.4	27.7	29.8	31.5	32.8	34.5	35.8	37.1	38.3
210.0	24.7	26.4	28.1	29.8	31.5	33.2	34.5	35.8	37.5	38.8
240.0	24.7	26.4	28.1	30.2	31.5	33.7	34.9	35.8	37.5	38.3
270.0	24.7	26.0	28.1	29.8	31.5	32.8	34.5	36.2	37.5	38.8
300.0	17.5	18.7	20.0	20.4	21.7	23.4	25.1	26.4	28.1	29.0
330.0	17.5	18.3	19.6	20.4	21.7	23.0	24.7	26.0	27.3	29.0
360.0	17.0	18.3	19.6	20.4	21.7	23.0	24.7	26.0	27.3	29.0

C\γ	160.0	161.0	162.0	163.0	164.0	165.0	166.0	167.0	168.0	169.0
0.0	29.8	31.1	32.4	33.7	34.9	35.8	36.6	37.9	38.8	39.6
30.0	30.2	31.5	32.4	34.1	34.9	36.2	37.1	37.9	39.2	40.0
60.0	30.2	31.1	32.8	33.7	34.5	36.2	37.1	37.9	39.2	39.6
90.0	30.2	31.1	32.4	33.7	34.9	35.8	37.1	37.9	39.2	39.6
120.0	39.2	40.0	41.3	42.2	43.0	43.9	44.3	45.2	45.6	45.6
150.0	39.2	40.5	41.3	42.2	43.4	43.9	44.3	44.7	45.2	45.6
180.0	39.2	40.5	41.7	42.2	43.4	43.9	44.7	45.2	45.2	45.6
210.0	39.6	40.9	41.3	42.6	43.4	43.9	44.7	45.2	45.2	45.6
240.0	39.6	40.9	41.7	42.6	43.4	43.9	44.7	45.2	45.6	45.6
270.0	39.6	40.9	41.7	42.2	43.0	43.9	44.3	45.2	45.2	45.6
300.0	30.2	31.5	32.4	33.2	34.9	35.8	36.6	37.5	38.8	39.2
330.0	29.8	31.1	32.8	33.7	34.9	35.8	36.6	37.5	38.3	39.2
360.0	29.8	31.1	32.4	33.7	34.9	35.8	36.6	37.9	38.8	39.6

C\γ	170.0	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0
0.0	40.5	40.9	41.3	41.7	42.2	42.6	43.4	43.9	44.7	45.6
30.0	40.5	40.9	41.7	41.7	42.2	43.0	43.4	44.3	45.2	46.0
60.0	40.9	41.3	41.7	42.2	42.6	43.0	43.9	44.3	45.2	46.0
90.0	40.5	40.9	41.7	42.2	42.6	43.4	43.9	44.7	45.2	46.0
120.0	46.0	46.0	46.0	46.0	46.0	45.6	45.6	46.0	46.0	46.0
150.0	46.0	46.0	46.0	45.6	45.6	45.6	45.6	45.6	46.0	46.4
180.0	46.0	46.0	45.6	45.6	45.2	45.6	45.6	45.6	46.0	46.0
210.0	46.0	45.6	45.6	45.6	45.6	45.6	45.6	46.0	46.0	46.4
240.0	46.0	46.0	46.0	45.6	45.6	45.6	45.6	46.0	46.4	46.4
270.0	45.6	45.6	45.6	45.6	45.6	45.6	45.6	46.0	46.4	46.4
300.0	40.0	40.5	40.9	41.3	41.7	42.2	43.0	43.9	44.3	45.6
330.0	40.0	40.5	40.9	41.3	41.7	42.6	43.0	43.9	44.7	45.6
360.0	40.5	40.9	41.3	41.7	42.2	42.6	43.4	43.9	44.7	45.6

Intensity Data [cd]

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C\γ	180.0
0.0	46.0
30.0	46.4
60.0	46.4
90.0	46.4
120.0	46.0
150.0	46.0
180.0	46.0
210.0	46.4
240.0	46.4
270.0	46.4
300.0	46.0
330.0	46.0
360.0	46.0

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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	6878.73	0.00	0.00	0.00	0.00
1	6933.74	6.61	6.61	6.61	6.61
2	7017.47	20.02	26.63	20.02	26.63
3	7094.89	33.75	60.39	33.75	60.39
4	7161.74	47.72	108.11	47.72	108.11
5	7216.33	61.85	169.96	61.85	169.96
6	7240.40	75.97	245.93	75.97	245.93
7	7234.40	89.84	335.78	89.84	335.78
8	7191.34	103.24	439.02	103.24	439.02
9	7093.47	115.77	554.79	115.77	554.79
10	6934.80	126.95	681.74	126.95	681.74
11	6760.05	136.84	818.58	136.84	818.58
12	6563.75	145.65	964.23	145.65	964.23
13	6335.36	153.08	1117.31	153.08	1117.31
14	6096.18	159.12	1276.43	159.12	1276.43
15	5809.46	163.45	1439.88	163.45	1439.88
16	5523.75	166.06	1605.94	166.06	1605.94
17	5229.22	167.45	1773.40	167.45	1773.40
18	4877.69	166.64	1940.04	166.64	1940.04
19	4512.07	163.36	2103.40	163.36	2103.40
20	4138.85	158.34	2261.74	158.34	2261.74
21	3755.37	151.59	2413.32	151.59	2413.32
22	3374.38	143.28	2556.60	143.28	2556.60
23	3017.35	134.12	2690.71	134.12	2690.71
24	2639.27	123.67	2814.39	123.67	2814.39
25	2322.49	112.82	2927.21	112.82	2927.21
26	2058.35	103.41	3030.62	103.41	3030.62
27	1843.13	95.45	3126.07	95.45	3126.07
28	1696.63	89.62	3215.69	89.62	3215.69
29	1598.62	86.21	3301.90	86.21	3301.90
30	1518.75	84.17	3386.07	84.17	3386.07
31	1414.93	81.64	3467.71	81.64	3467.71
32	1239.43	76.04	3543.75	76.04	3543.75
33	1023.78	66.67	3610.43	66.67	3610.43
34	773.31	54.39	3664.81	54.39	3664.81
35	551.98	41.16	3705.97	15.96	3680.77
36	354.65	28.87	3734.84	0.00	3680.77
37	216.75	18.64	3753.47	0.00	3680.77
38	156.86	12.47	3765.94	0.00	3680.77
39	132.33	9.87	3775.81	0.00	3680.77
40	111.99	8.52	3784.33	0.00	3680.77

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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	96.80	7.44	3791.77	0.00	3680.77
42	84.13	6.57	3798.34	0.00	3680.77
43	75.43	5.91	3804.25	0.00	3680.77
44	67.44	5.39	3809.65	0.00	3680.77
45	59.49	4.88	3814.52	0.00	3680.77
46	51.79	4.35	3818.88	0.00	3680.77
47	46.25	3.90	3822.78	0.00	3680.77
48	42.45	3.59	3826.36	0.00	3680.77
49	38.76	3.34	3829.70	0.00	3680.77
50	35.57	3.10	3832.80	0.00	3680.77
51	32.73	2.89	3835.69	0.00	3680.77
52	30.39	2.71	3838.39	0.00	3680.77
53	28.08	2.54	3840.94	0.00	3680.77
54	26.09	2.39	3843.32	0.00	3680.77
55	24.21	2.25	3845.57	0.00	3680.77
56	22.61	2.12	3847.68	0.00	3680.77
57	21.16	2.00	3849.68	0.00	3680.77
58	20.27	1.92	3851.60	0.00	3680.77
59	19.67	1.87	3853.47	0.00	3680.77
60	18.88	1.82	3855.29	0.00	3680.77
61	18.14	1.77	3857.05	0.00	3680.77
62	17.43	1.71	3858.77	0.00	3680.77
63	16.86	1.67	3860.44	0.00	3680.77
64	16.40	1.63	3862.07	0.00	3680.77
65	15.62	1.58	3863.65	0.00	3680.77
66	14.91	1.52	3865.18	0.00	3680.77
67	14.13	1.46	3866.64	0.00	3680.77
68	13.35	1.39	3868.03	0.00	3680.77
69	12.60	1.32	3869.35	0.00	3680.77
70	11.93	1.26	3870.61	0.00	3680.77
71	11.36	1.20	3871.82	0.00	3680.77
72	10.68	1.15	3872.96	0.00	3680.77
73	10.08	1.09	3874.05	0.00	3680.77
74	9.41	1.02	3875.07	0.00	3680.77
75	8.59	0.95	3876.02	0.00	3680.77
76	7.17	0.84	3876.86	0.00	3680.77
77	5.32	0.67	3877.53	0.00	3680.77
78	3.41	0.47	3877.99	0.00	3680.77
79	2.24	0.30	3878.30	0.00	3680.77
80	1.88	0.22	3878.52	0.00	3680.77
81	1.63	0.19	3878.71	0.00	3680.77

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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	1.46	0.17	3878.88	0.00	3680.77
83	1.31	0.15	3879.03	0.00	3680.77
84	1.06	0.13	3879.16	0.00	3680.77
85	0.96	0.11	3879.27	0.00	3680.77
86	0.71	0.09	3879.36	0.00	3680.77
87	0.64	0.07	3879.43	0.00	3680.77
88	0.43	0.06	3879.49	0.00	3680.77
89	0.39	0.04	3879.54	0.00	3680.77
90	0.39	0.04	3879.58	0.00	3680.77
91	0.28	0.04	3879.62	0.00	3680.77
92	0.39	0.04	3879.65	0.00	3680.77
93	0.25	0.04	3879.69	0.00	3680.77
94	0.32	0.03	3879.72	0.00	3680.77
95	0.32	0.03	3879.76	0.00	3680.77
96	0.39	0.04	3879.80	0.00	3680.77
97	0.39	0.04	3879.84	0.00	3680.77
98	0.32	0.04	3879.88	0.00	3680.77
99	0.28	0.03	3879.91	0.00	3680.77
100	0.32	0.03	3879.94	0.00	3680.77
101	0.35	0.04	3879.98	0.00	3680.77
102	0.43	0.04	3880.02	0.00	3680.77
103	0.39	0.04	3880.07	0.00	3680.77
104	0.25	0.03	3880.10	0.00	3680.77
105	0.35	0.03	3880.14	0.00	3680.77
106	0.32	0.04	3880.17	0.00	3680.77
107	0.43	0.04	3880.21	0.00	3680.77
108	0.39	0.04	3880.25	0.00	3680.77
109	0.35	0.04	3880.29	0.00	3680.77
110	0.43	0.04	3880.33	0.00	3680.77
111	0.32	0.04	3880.37	0.00	3680.77
112	0.43	0.04	3880.41	0.00	3680.77
113	0.43	0.04	3880.45	0.00	3680.77
114	0.43	0.04	3880.50	0.00	3680.77
115	0.43	0.04	3880.54	0.00	3680.77
116	0.43	0.04	3880.58	0.00	3680.77
117	0.43	0.04	3880.62	0.00	3680.77
118	0.43	0.04	3880.66	0.00	3680.77
119	0.43	0.04	3880.70	0.00	3680.77
120	0.43	0.04	3880.74	0.00	3680.77
121	0.43	0.04	3880.79	0.00	3680.77
122	0.43	0.04	3880.83	0.00	3680.77

R854 WNL (CRI90 1050mA 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	0.43	0.04	3880.86	0.00	3680.77
124	0.50	0.04	3880.91	0.00	3680.77
125	0.64	0.05	3880.96	0.00	3680.77
126	0.67	0.06	3881.02	0.00	3680.77
127	0.99	0.07	3881.09	0.00	3680.77
128	1.10	0.09	3881.18	0.00	3680.77
129	1.31	0.10	3881.28	0.00	3680.77
130	1.70	0.13	3881.41	0.00	3680.77
131	1.92	0.15	3881.56	0.00	3680.77
132	2.34	0.17	3881.74	0.00	3680.77
133	2.73	0.21	3881.94	0.00	3680.77
134	3.37	0.24	3882.19	0.00	3680.77
135	3.98	0.29	3882.47	0.00	3680.77
136	4.69	0.33	3882.81	0.00	3680.77
137	5.43	0.38	3883.19	0.00	3680.77
138	6.28	0.43	3883.62	0.00	3680.77
139	7.28	0.49	3884.11	0.00	3680.77
140	8.31	0.55	3884.67	0.00	3680.77
141	9.26	0.61	3885.28	0.00	3680.77
142	10.44	0.67	3885.95	0.00	3680.77
143	11.57	0.73	3886.69	0.00	3680.77
144	12.81	0.80	3887.49	0.00	3680.77
145	14.20	0.86	3888.35	0.00	3680.77
146	15.62	0.93	3889.27	0.00	3680.77
147	16.83	0.98	3890.25	0.00	3680.77
148	17.89	1.02	3891.28	0.00	3680.77
149	19.35	1.07	3892.34	0.00	3680.77
150	20.73	1.12	3893.46	0.00	3680.77
151	22.26	1.16	3894.62	0.00	3680.77
152	23.75	1.20	3895.82	0.00	3680.77
153	25.06	1.24	3897.06	0.00	3680.77
154	26.48	1.26	3898.32	0.00	3680.77
155	27.97	1.29	3899.60	0.00	3680.77
156	29.46	1.31	3900.91	0.00	3680.77
157	30.95	1.32	3902.23	0.00	3680.77
158	32.30	1.33	3903.56	0.00	3680.77
159	33.62	1.32	3904.88	0.00	3680.77
160	34.75	1.31	3906.20	0.00	3680.77
161	35.92	1.29	3907.49	0.00	3680.77
162	37.02	1.27	3908.76	0.00	3680.77
163	37.98	1.24	3909.99	0.00	3680.77

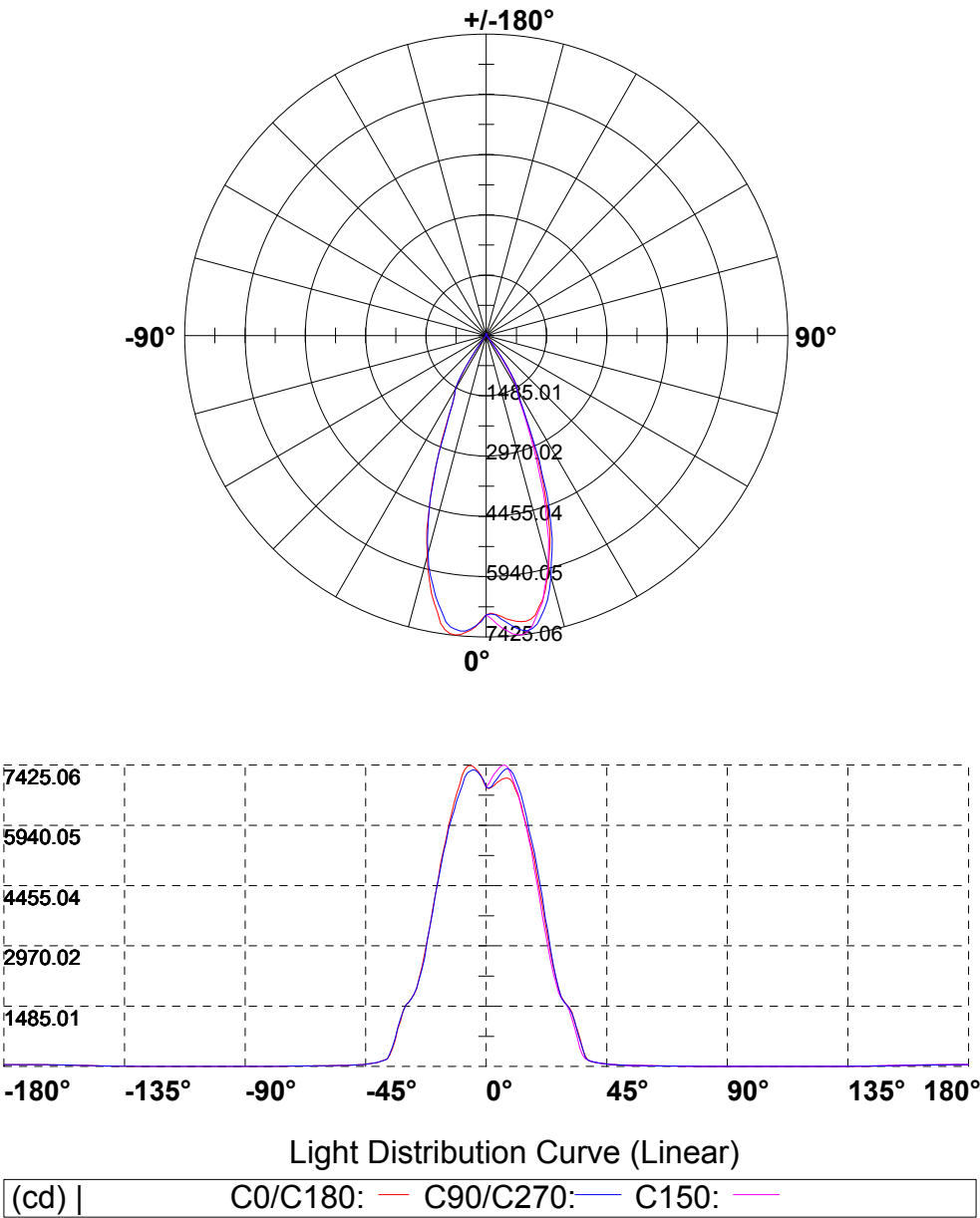
R854 WNL (CRI90 1050mA 40D)

Zonal flux distribution table

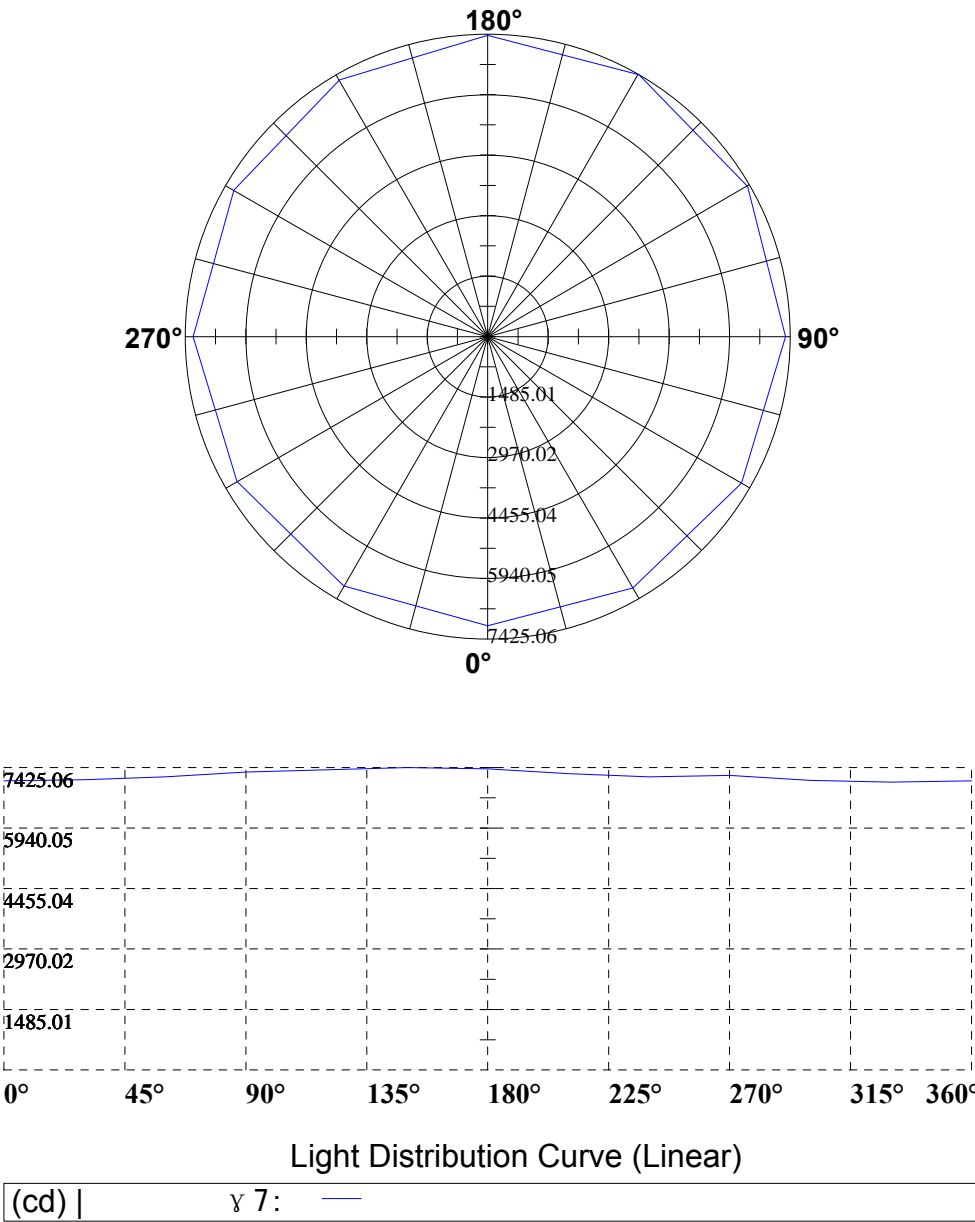
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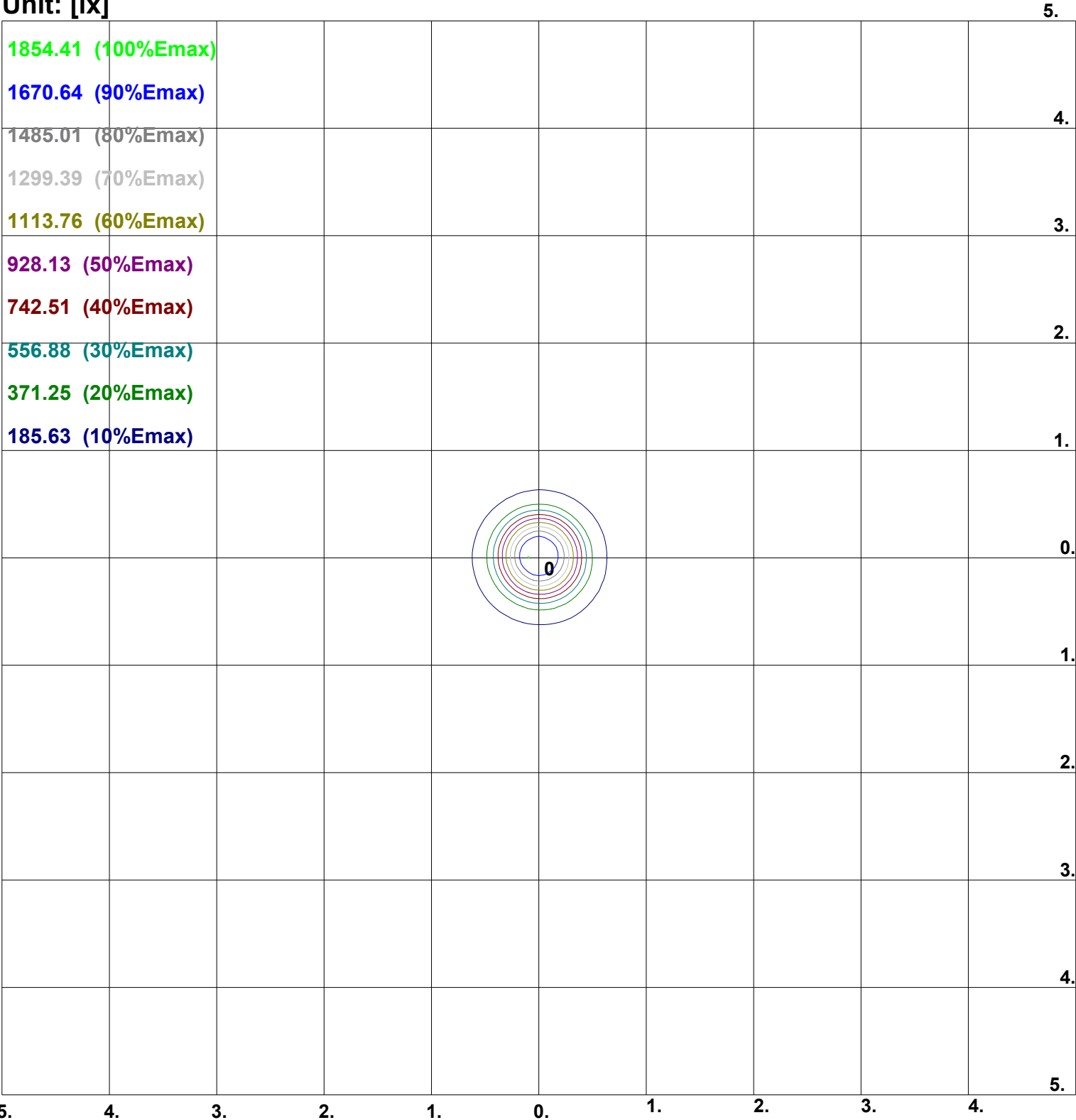
[illegible]

Light Distribution Curve [Unit: cd]



Horizontal cone through Max.cd [Unit: cd]





Coordinate Scale: d/h
Height: 2 m
Max Illuminance : 1856.26lx

Luminance Limiting Curve (There is not luminous side)

Diameter: 140mm

Length: -140mm

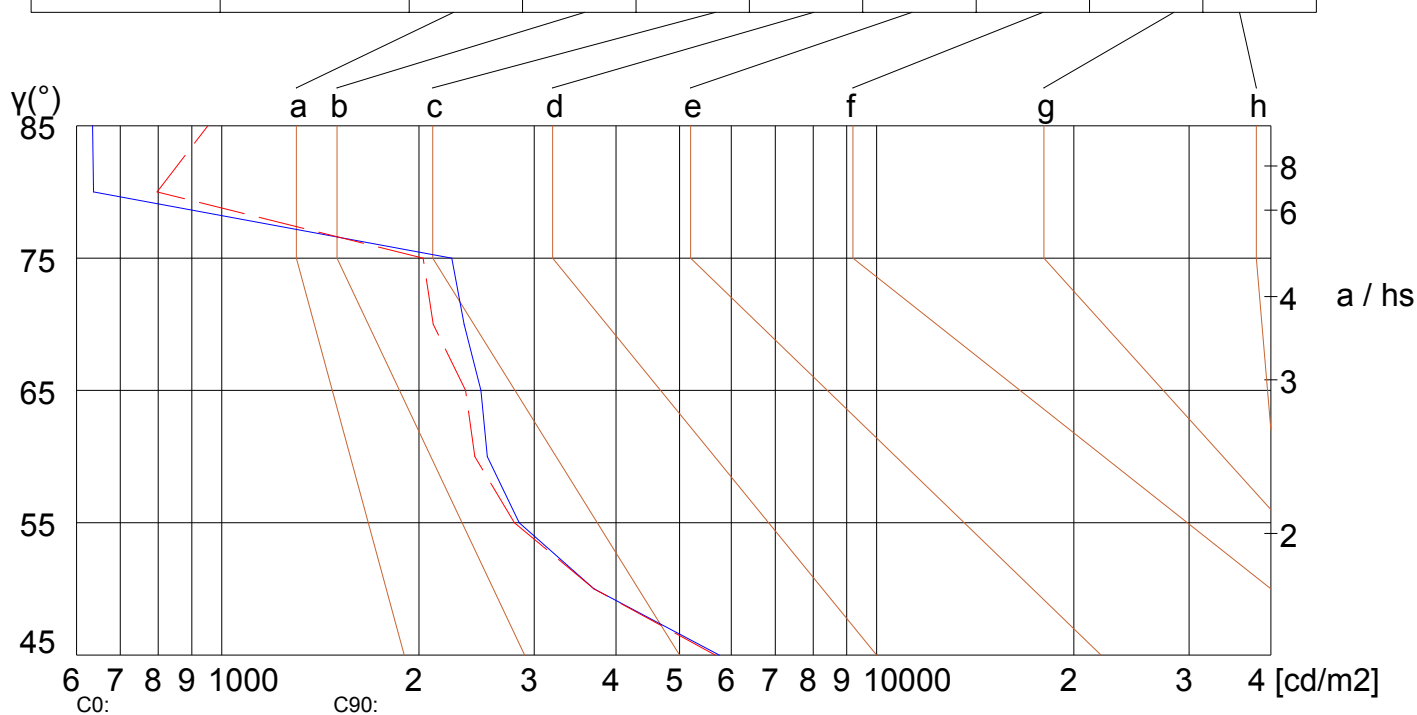
Width: -140mm

Height: 100mm

(cd/m²)

γ	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	5672	3701	2797	2434	2356	2103	2031	796	952
C90	5750	3701	2845	2545	2487	2345	2244	637	635

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 1050mA 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	COEFFICIENTS OF UTILIZATION FOR RHOFC=20															
0	1.05	1.05	1.05	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	1.02	1.01	1.00	1.00	0.99	0.98	0.96	0.95	0.94	0.91	0.90	0.89	0.85	0.84	0.83	0.78
2	0.96	0.95	0.95	0.95	0.94	0.93	0.91	0.90	0.89	0.87	0.85	0.84	0.82	0.80	0.78	0.74
3	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.85	0.84	0.83	0.81	0.79	0.79	0.76	0.74	0.70
4	0.87	0.86	0.85	0.86	0.84	0.83	0.83	0.81	0.79	0.80	0.77	0.75	0.76	0.73	0.71	0.67
5	0.83	0.82	0.81	0.82	0.80	0.79	0.79	0.77	0.75	0.76	0.74	0.71	0.73	0.70	0.67	0.64
6	0.79	0.78	0.77	0.78	0.77	0.75	0.76	0.73	0.72	0.73	0.70	0.68	0.70	0.67	0.64	0.61
7	0.76	0.74	0.74	0.75	0.73	0.72	0.72	0.70	0.68	0.70	0.67	0.65	0.67	0.64	0.61	0.58
8	0.72	0.71	0.70	0.71	0.70	0.69	0.69	0.67	0.65	0.67	0.64	0.62	0.65	0.61	0.58	0.55
9	0.69	0.68	0.67	0.68	0.67	0.66	0.67	0.64	0.63	0.64	0.61	0.59	0.62	0.59	0.56	0.53
10	0.66	0.65	0.65	0.66	0.64	0.63	0.64	0.62	0.60	0.62	0.59	0.57	0.60	0.56	0.54	0.51

