

## R854 WNL (CRI90 900mA 12D)

Luminaire Name: R854 WNL (CRI90 900mA 12D)

Report NO.: 01313217032405A

Test NO.:

Lamp: CITIZEN CLU038-1208C4-403H5M3 900mA

Sum Lumens: 3921.1 lm

Number of Lamps: 1

Diameter: 140mm

Length: -140mm

Photometric Type: Type C

Voltage: 230.37 V

Current: 0.1556 A

Power: 34.882 W

Power Factor: 0.9731

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

Width: -140mm

Height: 100mm

Optical Component: 12D Reflector DC(V:35.61V I:0.906A P:32.26W)

## Photometric Results

Lumens: 3496.47 lm

Efficiency: 89.17%

Central Intensity: 45766.69cd

Maximum Intensity: 46136.629cd

Beam Angle(10%): Left: -11.2 Right:10.5

Maximum s/h: C0\_180: 0.11 C90\_270: 0.1

Effective Luminous Flux: 1819.79 lm

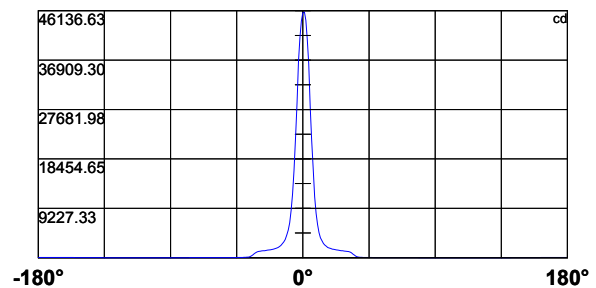
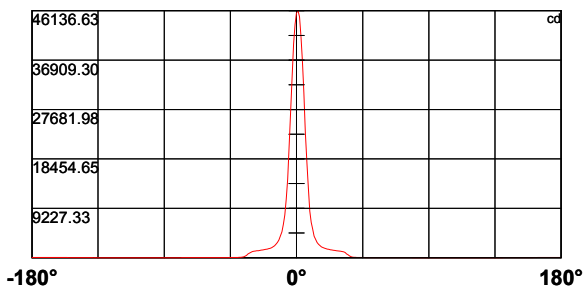
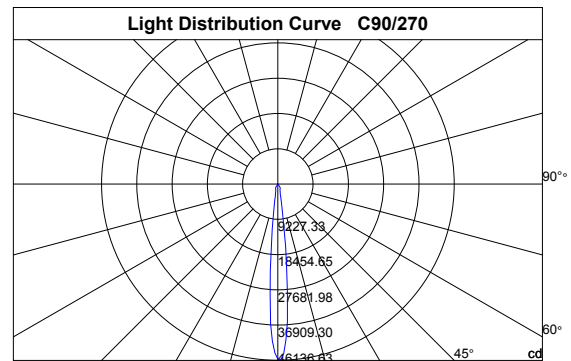
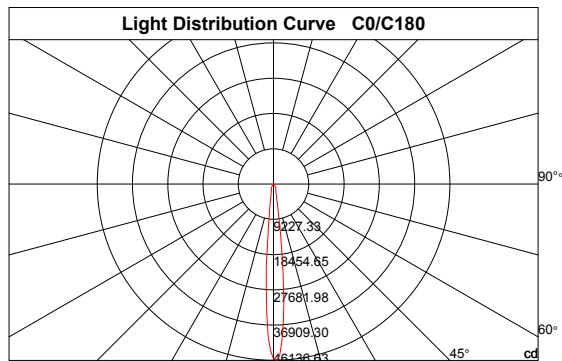
Angle of maximum intensity: C:30.0 G:1.0

Half Peak Side Angle(50%): Left: -5.7 Right:5.2

Up Flux Rate: 0.78%

Down Flux Rate: 88.39%

CIE Classification: Direct



**R854 WNL (CRI90 900mA 12D)**

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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	45766.7	46072.7	44982.3	41318.9	36735.5	30869.9	23564.6	17805.5	13090.0	8702.5
30.0	45766.7	46136.6	44535.0	41664.0	36424.6	30567.5	24297.2	18457.2	12881.3	9448.0
60.0	45766.7	46030.1	44743.7	42000.5	37072.0	30448.2	24169.4	18337.9	12114.5	8843.1
90.0	45766.7	45915.1	44360.3	40718.3	36181.8	28339.7	22103.5	16540.3	11386.1	8285.1
120.0	45766.7	44040.9	40914.3	36445.9	29724.1	23500.7	17004.7	12583.1	9264.8	6440.6
150.0	45766.7	43606.4	40121.9	35214.8	29183.1	21958.7	16570.2	11151.8	8549.2	6329.9
180.0	45766.7	43555.3	39985.6	33966.7	27713.5	21511.4	14678.9	10943.1	7952.8	6210.6
210.0	45766.7	43734.2	39542.6	34362.9	27087.3	20940.6	14900.4	11024.1	7620.6	5989.1
240.0	45766.7	43823.6	40454.2	34754.8	28659.2	22423.0	15253.9	11185.9	7978.4	6193.6
270.0	45766.7	44194.2	41101.7	36675.9	28914.7	22716.9	16289.0	11931.4	8843.1	6487.5
300.0	45766.7	45553.1	43785.3	39947.3	35197.8	29289.6	22099.2	16536.1	10806.8	7957.1
330.0	45766.7	45970.5	44074.9	41008.0	36462.9	29604.8	23347.3	17626.6	12284.9	9005.0
360.0	45766.7	46072.7	44982.3	41318.9	36735.5	30869.9	23564.6	17805.5	13090.0	8702.5

C\γ	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
0.0	6598.2	5371.5	4038.2	3377.9	2841.2	2500.4	2249.1	2010.6	1882.8	1776.3
30.0	6500.3	5107.4	4127.6	3339.6	2871.0	2517.5	2219.3	2036.1	1895.6	1750.7
60.0	6364.0	5000.9	4051.0	3288.5	2828.4	2483.4	2155.4	1980.8	1844.4	1725.2
90.0	6219.1	4711.2	3723.0	3143.6	2662.3	2364.1	2138.4	1921.1	1806.1	1708.1
120.0	5137.2	4212.8	3463.1	2986.0	2624.0	2300.2	2095.8	1887.0	1776.3	1691.1
150.0	5056.2	4157.5	3335.3	2892.3	2547.3	2249.1	2057.4	1912.6	1767.8	1699.6
180.0	4817.7	4110.6	3301.3	2862.5	2526.0	2236.3	2048.9	1865.7	1767.8	1686.8
210.0	4830.5	3893.4	3318.3	2871.0	2487.7	2249.1	2061.7	1870.0	1767.8	1686.8
240.0	4962.5	3872.1	3322.6	2943.4	2491.9	2249.1	2061.7	1887.0	1776.3	1669.8
270.0	5158.5	4242.6	3407.7	2952.0	2598.4	2287.4	2087.2	1904.1	1789.1	1695.4
300.0	6053.0	4591.9	3761.3	3182.0	2636.7	2347.1	2108.5	1955.2	1835.9	1725.2
330.0	6219.1	4902.9	3991.3	3254.4	2815.6	2483.4	2168.2	2002.1	1895.6	1755.0
360.0	6598.2	5371.5	4038.2	3377.9	2841.2	2500.4	2249.1	2010.6	1882.8	1776.3

C\γ	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
0.0	1678.3	1605.9	1550.5	1490.9	1448.3	1392.9	1358.8	1316.2	1273.6	1243.8
30.0	1669.8	1588.9	1533.5	1482.4	1427.0	1384.4	1350.3	1303.5	1269.4	1239.6
60.0	1644.2	1559.0	1516.4	1469.6	1410.0	1375.9	1341.8	1294.9	1260.9	1222.5
90.0	1618.7	1559.0	1503.7	1448.3	1405.7	1354.6	1320.5	1282.2	1243.8	1214.0
120.0	1601.6	1546.3	1490.9	1427.0	1397.2	1358.8	1303.5	1273.6	1243.8	1209.8
150.0	1605.9	1554.8	1503.7	1452.6	1397.2	1358.8	1312.0	1273.6	1243.8	1205.5
180.0	1610.2	1554.8	1503.7	1448.3	1410.0	1371.6	1312.0	1282.2	1248.1	1205.5
210.0	1610.2	1554.8	1495.1	1448.3	1405.7	1354.6	1307.7	1277.9	1243.8	1209.8
240.0	1601.6	1546.3	1486.6	1439.8	1397.2	1358.8	1312.0	1269.4	1243.8	1214.0
270.0	1601.6	1546.3	1495.1	1439.8	1401.4	1367.4	1316.2	1286.4	1252.3	1218.3
300.0	1644.2	1580.3	1507.9	1456.8	1405.7	1367.4	1329.0	1290.7	1252.3	1222.5
330.0	1669.8	1601.6	1533.5	1482.4	1422.7	1380.1	1346.1	1294.9	1265.1	1231.0
360.0	1678.3	1605.9	1550.5	1490.9	1448.3	1392.9	1358.8	1316.2	1273.6	1243.8

## R854 WNL (CRI90 900mA 12D)

### Intensity Data [cd]

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C\γ	30.0	31.0	32.0	33.0	34.0	35.0	36.0	37.0	38.0	39.0
0.0	1209.8	1167.2	1090.5	954.2	724.1	545.2	340.8	200.2	106.5	72.4
30.0	1205.5	1171.4	1060.7	920.1	745.4	532.5	357.8	208.7	102.2	76.7
60.0	1188.5	1158.6	1056.4	903.1	732.7	519.7	345.0	200.2	89.5	68.2
90.0	1184.2	1145.9	1052.1	911.6	673.0	485.6	285.4	157.6	89.5	72.4
120.0	1175.7	1082.0	915.8	732.7	502.6	328.0	195.9	98.0	80.9	63.9
150.0	1141.6	1030.8	877.5	668.8	485.6	289.7	166.1	102.2	76.7	63.9
180.0	1158.6	1022.3	830.6	685.8	447.3	281.1	161.9	93.7	76.7	59.6
210.0	1167.2	1039.4	881.8	643.2	464.3	293.9	153.3	93.7	76.7	59.6
240.0	1175.7	1060.7	903.1	694.3	506.9	332.3	157.6	93.7	76.7	59.6
270.0	1184.2	1086.2	941.4	758.2	506.9	328.0	195.9	102.2	80.9	63.9
300.0	1179.9	1145.9	1052.1	886.0	698.6	502.6	311.0	149.1	85.2	68.2
330.0	1197.0	1162.9	1090.5	903.1	724.1	506.9	332.3	191.7	93.7	72.4
360.0	1209.8	1167.2	1090.5	954.2	724.1	545.2	340.8	200.2	106.5	72.4

C\γ	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0
0.0	59.6	51.1	42.6	38.3	38.3	34.1	29.8	25.6	25.6	25.6
30.0	59.6	46.9	42.6	38.3	34.1	34.1	29.8	29.8	25.6	25.6
60.0	55.4	46.9	42.6	38.3	34.1	34.1	29.8	29.8	25.6	25.6
90.0	55.4	51.1	42.6	38.3	38.3	34.1	34.1	29.8	25.6	25.6
120.0	51.1	46.9	42.6	38.3	34.1	34.1	25.6	25.6	25.6	21.3
150.0	55.4	46.9	38.3	34.1	34.1	29.8	25.6	25.6	21.3	21.3
180.0	51.1	46.9	42.6	34.1	34.1	29.8	25.6	21.3	21.3	21.3
210.0	51.1	42.6	38.3	34.1	34.1	29.8	25.6	25.6	21.3	21.3
240.0	51.1	46.9	38.3	38.3	34.1	29.8	25.6	25.6	25.6	21.3
270.0	55.4	51.1	38.3	38.3	34.1	29.8	25.6	25.6	25.6	21.3
300.0	55.4	46.9	42.6	38.3	34.1	34.1	29.8	25.6	25.6	25.6
330.0	55.4	46.9	42.6	38.3	34.1	29.8	29.8	25.6	25.6	21.3
360.0	59.6	51.1	42.6	38.3	38.3	34.1	29.8	25.6	25.6	25.6

C\γ	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
0.0	21.3	21.3	21.3	17.0	21.3	17.0	17.0	21.3	21.3	21.3
30.0	25.6	21.3	21.3	21.3	17.0	21.3	17.0	17.0	17.0	21.3
60.0	25.6	21.3	21.3	21.3	21.3	21.3	17.0	17.0	21.3	21.3
90.0	21.3	21.3	21.3	21.3	17.0	21.3	21.3	21.3	21.3	21.3
120.0	21.3	21.3	21.3	17.0	21.3	17.0	21.3	17.0	21.3	21.3
150.0	21.3	17.0	21.3	17.0	21.3	17.0	17.0	17.0	21.3	21.3
180.0	21.3	21.3	17.0	17.0	17.0	17.0	21.3	21.3	21.3	21.3
210.0	21.3	21.3	21.3	17.0	21.3	21.3	17.0	21.3	21.3	21.3
240.0	21.3	21.3	21.3	17.0	21.3	21.3	21.3	21.3	21.3	21.3
270.0	21.3	21.3	17.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3
300.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3
330.0	21.3	21.3	21.3	21.3	21.3	17.0	21.3	17.0	21.3	21.3
360.0	21.3	21.3	21.3	17.0	21.3	17.0	17.0	21.3	21.3	21.3

**R854 WNL (CRI90 900mA 12D)****Intensity Data [cd]****Page4**

C\γ	60.0	61.0	62.0	63.0	64.0	65.0	66.0	67.0	68.0	69.0
0.0	21.3	21.3	21.3	21.3	21.3	17.0	17.0	12.8	12.8	12.8
30.0	21.3	21.3	21.3	21.3	21.3	17.0	17.0	12.8	12.8	8.5
60.0	25.6	25.6	25.6	21.3	17.0	17.0	12.8	12.8	12.8	12.8
90.0	21.3	25.6	21.3	21.3	17.0	12.8	12.8	12.8	12.8	12.8
120.0	25.6	21.3	17.0	17.0	17.0	12.8	12.8	12.8	12.8	12.8
150.0	21.3	21.3	17.0	17.0	17.0	12.8	12.8	12.8	12.8	8.5
180.0	25.6	25.6	21.3	17.0	17.0	17.0	12.8	12.8	12.8	8.5
210.0	21.3	21.3	21.3	17.0	17.0	12.8	8.5	12.8	12.8	8.5
240.0	25.6	21.3	21.3	17.0	17.0	12.8	12.8	12.8	12.8	8.5
270.0	25.6	21.3	17.0	17.0	17.0	12.8	12.8	8.5	12.8	12.8
300.0	21.3	21.3	21.3	17.0	17.0	12.8	12.8	12.8	12.8	8.5
330.0	21.3	21.3	21.3	21.3	17.0	17.0	17.0	12.8	12.8	8.5
360.0	21.3	21.3	21.3	21.3	21.3	17.0	17.0	12.8	12.8	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	8.5	8.5	8.5	8.5	8.5	8.5	8.5	4.3	4.3	0.0
30.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5	4.3	4.3	0.0
60.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5	4.3	4.3	0.0
90.0	8.5	8.5	8.5	8.5	8.5	8.5	4.3	4.3	4.3	0.0
120.0	8.5	8.5	8.5	8.5	8.5	8.5	4.3	4.3	4.3	0.0
150.0	8.5	8.5	8.5	8.5	8.5	4.3	4.3	4.3	4.3	0.0
180.0	12.8	8.5	8.5	8.5	8.5	8.5	4.3	4.3	4.3	0.0
210.0	12.8	8.5	8.5	8.5	8.5	8.5	4.3	4.3	4.3	0.0
240.0	12.8	8.5	8.5	8.5	8.5	8.5	4.3	4.3	4.3	0.0
270.0	12.8	12.8	8.5	12.8	8.5	8.5	4.3	4.3	0.0	0.0
300.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5	4.3	4.3	0.0
330.0	8.5	8.5	8.5	8.5	8.5	8.5	4.3	4.3	4.3	0.0
360.0	8.5	8.5	8.5	8.5	8.5	8.5	8.5	4.3	4.3	0.0

C\γ	80.0	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
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

## R854 WNL (CRI90 900mA 12D)

### 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

**R854 WNL (CRI90 900mA 12D)****Intensity Data [cd]****Page6**

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

## R854 WNL (CRI90 900mA 12D)

### Intensity Data [cd]

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

C\γ	160.0	161.0	162.0	163.0	164.0	165.0	166.0	167.0	168.0	169.0
0.0	25.6	25.6	29.8	25.6	29.8	29.8	29.8	34.1	34.1	34.1
30.0	25.6	29.8	29.8	29.8	29.8	29.8	29.8	34.1	34.1	34.1
60.0	25.6	25.6	29.8	29.8	29.8	29.8	29.8	34.1	29.8	29.8
90.0	25.6	25.6	29.8	29.8	29.8	29.8	34.1	29.8	34.1	34.1
120.0	29.8	34.1	34.1	34.1	34.1	34.1	38.3	38.3	38.3	38.3
150.0	29.8	34.1	34.1	34.1	34.1	38.3	34.1	38.3	38.3	38.3
180.0	29.8	29.8	34.1	34.1	34.1	34.1	38.3	38.3	38.3	38.3
210.0	34.1	34.1	34.1	34.1	34.1	34.1	38.3	34.1	38.3	38.3
240.0	29.8	29.8	34.1	34.1	34.1	34.1	38.3	38.3	38.3	38.3
270.0	29.8	34.1	34.1	34.1	34.1	34.1	34.1	38.3	38.3	38.3
300.0	25.6	25.6	29.8	29.8	29.8	29.8	29.8	34.1	34.1	34.1
330.0	25.6	25.6	29.8	29.8	29.8	29.8	29.8	29.8	34.1	34.1
360.0	25.6	25.6	29.8	25.6	29.8	29.8	29.8	34.1	34.1	34.1

C\γ	170.0	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0
0.0	34.1	34.1	34.1	34.1	34.1	34.1	34.1	29.8	29.8	29.8
30.0	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	29.8	29.8
60.0	34.1	34.1	34.1	34.1	34.1	34.1	29.8	29.8	29.8	29.8
90.0	34.1	34.1	34.1	34.1	34.1	34.1	29.8	34.1	29.8	29.8
120.0	38.3	38.3	38.3	34.1	34.1	34.1	34.1	29.8	29.8	29.8
150.0	38.3	38.3	34.1	38.3	34.1	34.1	34.1	34.1	29.8	29.8
180.0	38.3	38.3	38.3	38.3	34.1	34.1	34.1	29.8	29.8	29.8
210.0	38.3	38.3	38.3	38.3	34.1	34.1	29.8	34.1	29.8	29.8
240.0	38.3	38.3	38.3	34.1	34.1	34.1	34.1	29.8	29.8	29.8
270.0	38.3	38.3	38.3	38.3	34.1	34.1	34.1	34.1	29.8	29.8
300.0	34.1	34.1	34.1	34.1	34.1	34.1	29.8	29.8	29.8	29.8
330.0	34.1	34.1	34.1	34.1	34.1	34.1	29.8	34.1	29.8	29.8
360.0	34.1	34.1	34.1	34.1	34.1	34.1	34.1	29.8	29.8	29.8

Intensity Data [cd]		Page8
C\γ	180.0	
0.0	29.8	
30.0	29.8	
60.0	34.1	
90.0	29.8	
120.0	29.8	
150.0	29.8	
180.0	29.8	
210.0	29.8	
240.0	34.1	
270.0	29.8	
300.0	29.8	
330.0	29.8	
360.0	29.8	

**R854 WNL (CRI90 900mA 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]
0	45766.69	0.00	0.00	0.00	0.00
1	44886.06	43.38	43.38	43.38	43.38
2	42383.49	125.26	168.63	125.26	168.63
3	38173.15	192.67	361.30	192.67	361.30
4	32446.36	236.39	597.69	236.39	597.69
5	26014.24	251.49	849.18	251.49	849.18
6	19523.19	239.31	1088.49	239.31	1088.49
7	14510.26	211.25	1299.74	211.25	1299.74
8	10231.05	177.07	1476.81	177.07	1476.81
9	7491.01	143.63	1620.43	143.63	1620.43
10	5659.70	119.01	1739.44	119.01	1739.44
11	4514.55	101.66	1841.10	71.86	1811.30
12	3653.39	89.29	1930.39	8.49	1819.79
13	3091.11	80.04	2010.43	0.00	1819.79
14	2660.88	73.63	2084.06	0.00	1819.79
15	2355.61	68.87	2152.93	0.00	1819.79
16	2120.97	65.59	2218.52	0.00	1819.79
17	1936.03	63.18	2281.70	0.00	1819.79
18	1817.11	61.88	2343.58	0.00	1819.79
19	1714.17	61.44	2405.02	0.00	1819.79
20	1629.68	61.20	2466.22	0.00	1819.79
21	1566.50	61.37	2527.59	0.00	1819.79
22	1510.06	61.82	2589.42	0.00	1819.79
23	1457.17	62.26	2651.68	0.00	1819.79
24	1410.67	62.70	2714.38	0.00	1819.79
25	1368.78	63.20	2777.58	0.00	1819.79
26	1325.83	63.61	2841.18	0.00	1819.79
27	1287.13	63.93	2905.11	0.00	1819.79
28	1253.41	64.32	2969.43	0.00	1819.79
29	1219.69	64.70	3034.13	0.00	1819.79
30	1180.64	64.81	3098.94	0.00	1819.79
31	1106.10	63.64	3162.58	0.00	1819.79
32	979.37	59.75	3222.33	0.00	1819.79
33	805.08	52.57	3274.90	0.00	1819.79
34	600.97	42.55	3317.45	0.00	1819.79
35	412.12	31.46	3348.91	0.00	1819.79
36	250.26	21.09	3370.00	0.00	1819.79
37	140.92	12.76	3382.76	0.00	1819.79
38	86.26	7.58	3390.34	0.00	1819.79
39	66.74	5.22	3395.56	0.00	1819.79
40	54.67	4.23	3399.80	0.00	1819.79

**R854 WNL (CRI90 900mA 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]
41	47.57	3.64	3403.44	0.00	1819.79
42	41.18	3.22	3406.66	0.00	1819.79
43	37.27	2.91	3409.57	0.00	1819.79
44	34.79	2.72	3412.29	0.00	1819.79
45	31.95	2.56	3414.85	0.00	1819.79
46	28.04	2.35	3417.20	0.00	1819.79
47	26.27	2.16	3419.36	0.00	1819.79
48	24.49	2.05	3421.41	0.00	1819.79
49	23.07	1.95	3423.36	0.00	1819.79
50	22.01	1.88	3425.24	0.00	1819.79
51	20.94	1.82	3427.06	0.00	1819.79
52	20.59	1.78	3428.84	0.00	1819.79
53	19.17	1.73	3430.57	0.00	1819.79
54	20.23	1.74	3432.31	0.00	1819.79
55	19.52	1.77	3434.08	0.00	1819.79
56	19.52	1.76	3435.85	0.00	1819.79
57	19.52	1.79	3437.63	0.00	1819.79
58	20.94	1.87	3439.50	0.00	1819.79
59	21.30	1.97	3441.48	0.00	1819.79
60	23.07	2.10	3443.58	0.00	1819.79
61	22.36	2.17	3445.74	0.00	1819.79
62	20.59	2.07	3447.82	0.00	1819.79
63	18.81	1.92	3449.73	0.00	1819.79
64	17.75	1.79	3451.53	0.00	1819.79
65	14.55	1.60	3453.13	0.00	1819.79
66	13.49	1.40	3454.52	0.00	1819.79
67	12.42	1.30	3455.83	0.00	1819.79
68	12.78	1.28	3457.10	0.00	1819.79
69	10.29	1.18	3458.28	0.00	1819.79
70	9.94	1.04	3459.32	0.00	1819.79
71	8.87	0.97	3460.29	0.00	1819.79
72	8.52	0.90	3461.20	0.00	1819.79
73	8.87	0.91	3462.11	0.00	1819.79
74	8.52	0.91	3463.02	0.00	1819.79
75	8.16	0.88	3463.90	0.00	1819.79
76	5.68	0.73	3464.64	0.00	1819.79
77	4.26	0.53	3465.17	0.00	1819.79
78	3.90	0.44	3465.61	0.00	1819.79
79	0.00	0.21	3465.81	0.00	1819.79
80	0.00	0.00	3465.81	0.00	1819.79
81	0.00	0.00	3465.81	0.00	1819.79

**R854 WNL (CRI90 900mA 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]
82	0.00	0.00	3465.81	0.00	1819.79
83	0.00	0.00	3465.81	0.00	1819.79
84	0.00	0.00	3465.81	0.00	1819.79
85	0.00	0.00	3465.81	0.00	1819.79
86	0.00	0.00	3465.81	0.00	1819.79
87	0.00	0.00	3465.81	0.00	1819.79
88	0.00	0.00	3465.81	0.00	1819.79
89	0.00	0.00	3465.81	0.00	1819.79
90	0.00	0.00	3465.81	0.00	1819.79
91	0.00	0.00	3465.81	0.00	1819.79
92	0.00	0.00	3465.81	0.00	1819.79
93	0.00	0.00	3465.81	0.00	1819.79
94	0.00	0.00	3465.81	0.00	1819.79
95	0.00	0.00	3465.81	0.00	1819.79
96	0.00	0.00	3465.81	0.00	1819.79
97	0.00	0.00	3465.81	0.00	1819.79
98	0.00	0.00	3465.81	0.00	1819.79
99	0.00	0.00	3465.81	0.00	1819.79
100	0.00	0.00	3465.81	0.00	1819.79
101	0.00	0.00	3465.81	0.00	1819.79
102	0.00	0.00	3465.81	0.00	1819.79
103	0.00	0.00	3465.81	0.00	1819.79
104	0.00	0.00	3465.81	0.00	1819.79
105	0.00	0.00	3465.81	0.00	1819.79
106	0.00	0.00	3465.81	0.00	1819.79
107	0.00	0.00	3465.81	0.00	1819.79
108	0.00	0.00	3465.81	0.00	1819.79
109	0.00	0.00	3465.81	0.00	1819.79
110	0.00	0.00	3465.81	0.00	1819.79
111	0.00	0.00	3465.81	0.00	1819.79
112	0.00	0.00	3465.81	0.00	1819.79
113	0.00	0.00	3465.81	0.00	1819.79
114	0.00	0.00	3465.81	0.00	1819.79
115	0.00	0.00	3465.81	0.00	1819.79
116	0.00	0.00	3465.81	0.00	1819.79
117	0.00	0.00	3465.81	0.00	1819.79
118	0.00	0.00	3465.81	0.00	1819.79
119	0.00	0.00	3465.81	0.00	1819.79
120	0.00	0.00	3465.81	0.00	1819.79
121	0.00	0.00	3465.81	0.00	1819.79
122	0.00	0.00	3465.81	0.00	1819.79

**R854 WNL (CRI90 900mA 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	3465.81	0.00	1819.79
124	0.00	0.00	3465.81	0.00	1819.79
125	0.00	0.00	3465.81	0.00	1819.79
126	0.00	0.00	3465.81	0.00	1819.79
127	0.00	0.00	3465.81	0.00	1819.79
128	0.00	0.00	3465.81	0.00	1819.79
129	0.00	0.00	3465.81	0.00	1819.79
130	0.00	0.00	3465.81	0.00	1819.79
131	0.00	0.00	3465.81	0.00	1819.79
132	0.00	0.00	3465.81	0.00	1819.79
133	0.00	0.00	3465.81	0.00	1819.79
134	0.00	0.00	3465.81	0.00	1819.79
135	0.00	0.00	3465.81	0.00	1819.79
136	0.00	0.00	3465.81	0.00	1819.79
137	0.71	0.03	3465.84	0.00	1819.79
138	1.06	0.07	3465.91	0.00	1819.79
139	2.13	0.12	3466.02	0.00	1819.79
140	2.13	0.15	3466.18	0.00	1819.79
141	4.26	0.22	3466.40	0.00	1819.79
142	6.39	0.36	3466.76	0.00	1819.79
143	7.10	0.45	3467.21	0.00	1819.79
144	8.52	0.51	3467.72	0.00	1819.79
145	11.71	0.64	3468.37	0.00	1819.79
146	12.78	0.76	3469.13	0.00	1819.79
147	14.55	0.83	3469.95	0.00	1819.79
148	16.68	0.92	3470.87	0.00	1819.79
149	17.75	0.99	3471.86	0.00	1819.79
150	19.52	1.04	3472.90	0.00	1819.79
151	20.23	1.07	3473.97	0.00	1819.79
152	20.94	1.08	3475.05	0.00	1819.79
153	22.72	1.11	3476.15	0.00	1819.79
154	23.43	1.13	3477.28	0.00	1819.79
155	23.43	1.11	3478.39	0.00	1819.79
156	24.85	1.10	3479.49	0.00	1819.79
157	26.62	1.13	3480.61	0.00	1819.79
158	27.69	1.14	3481.75	0.00	1819.79
159	27.69	1.11	3482.87	0.00	1819.79
160	28.04	1.07	3483.94	0.00	1819.79
161	29.46	1.05	3484.99	0.00	1819.79
162	31.95	1.07	3486.06	0.00	1819.79
163	31.59	1.05	3487.11	0.00	1819.79

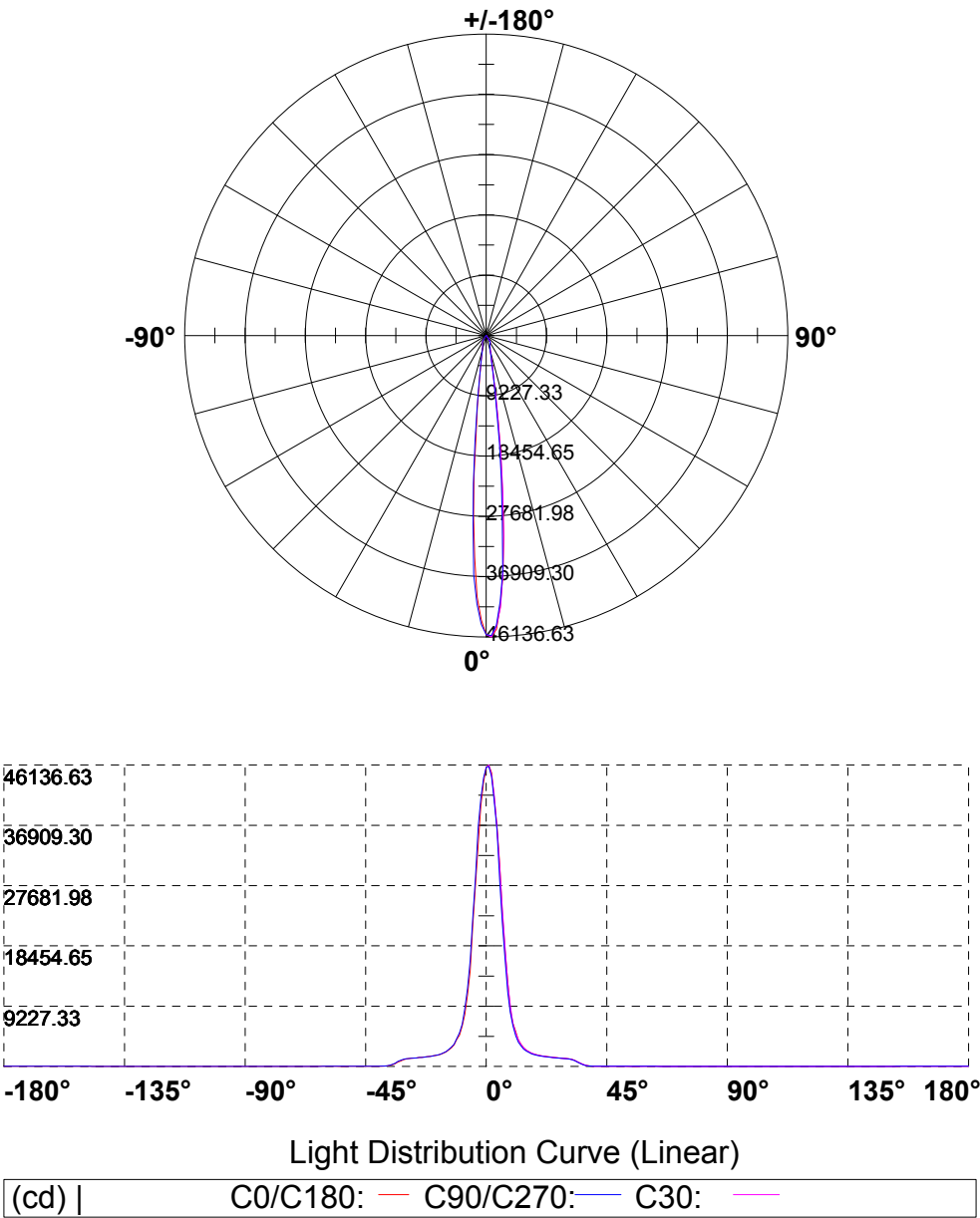
### R854 WNL (CRI90 900mA 12D)

### Zonal flux distribution table

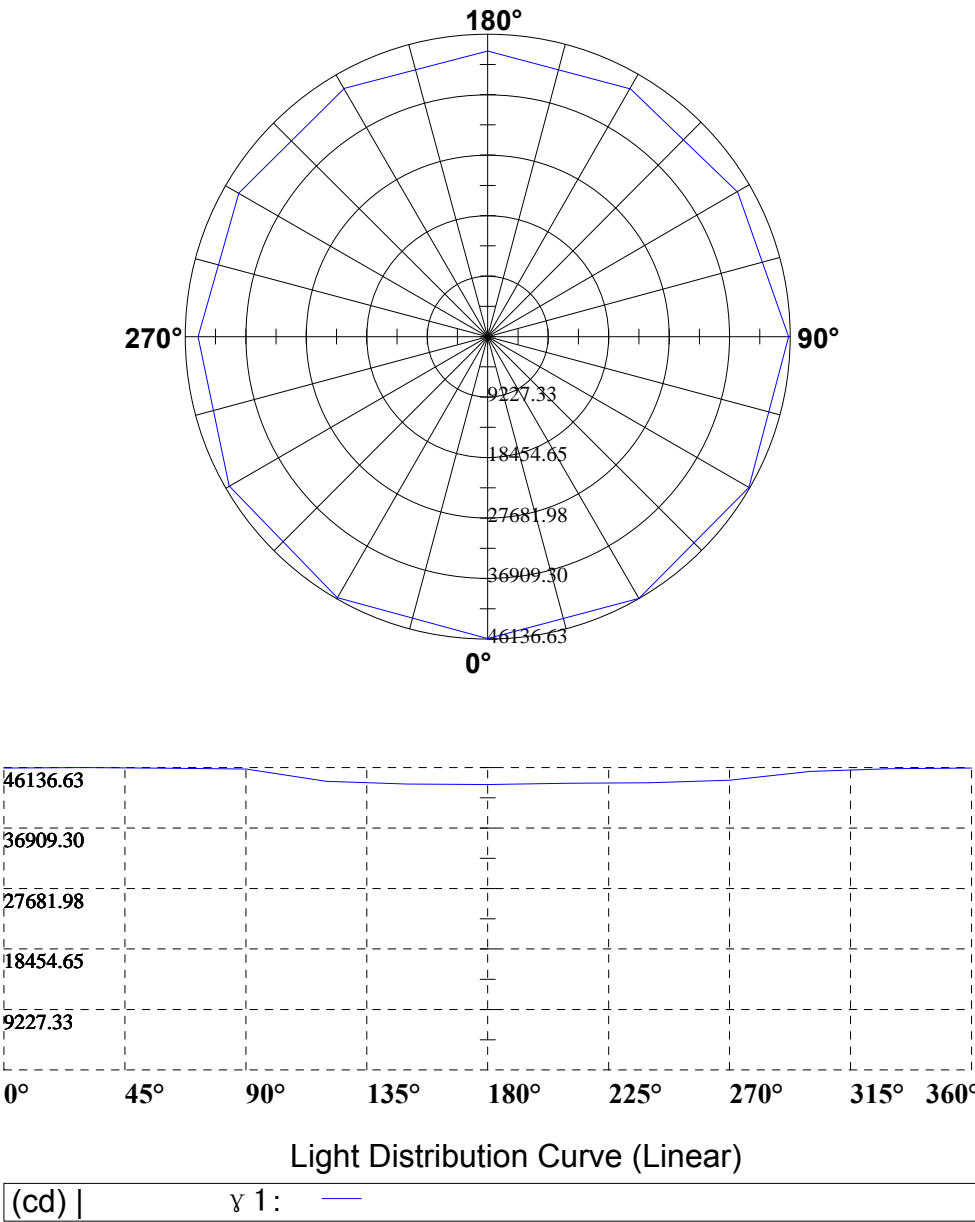
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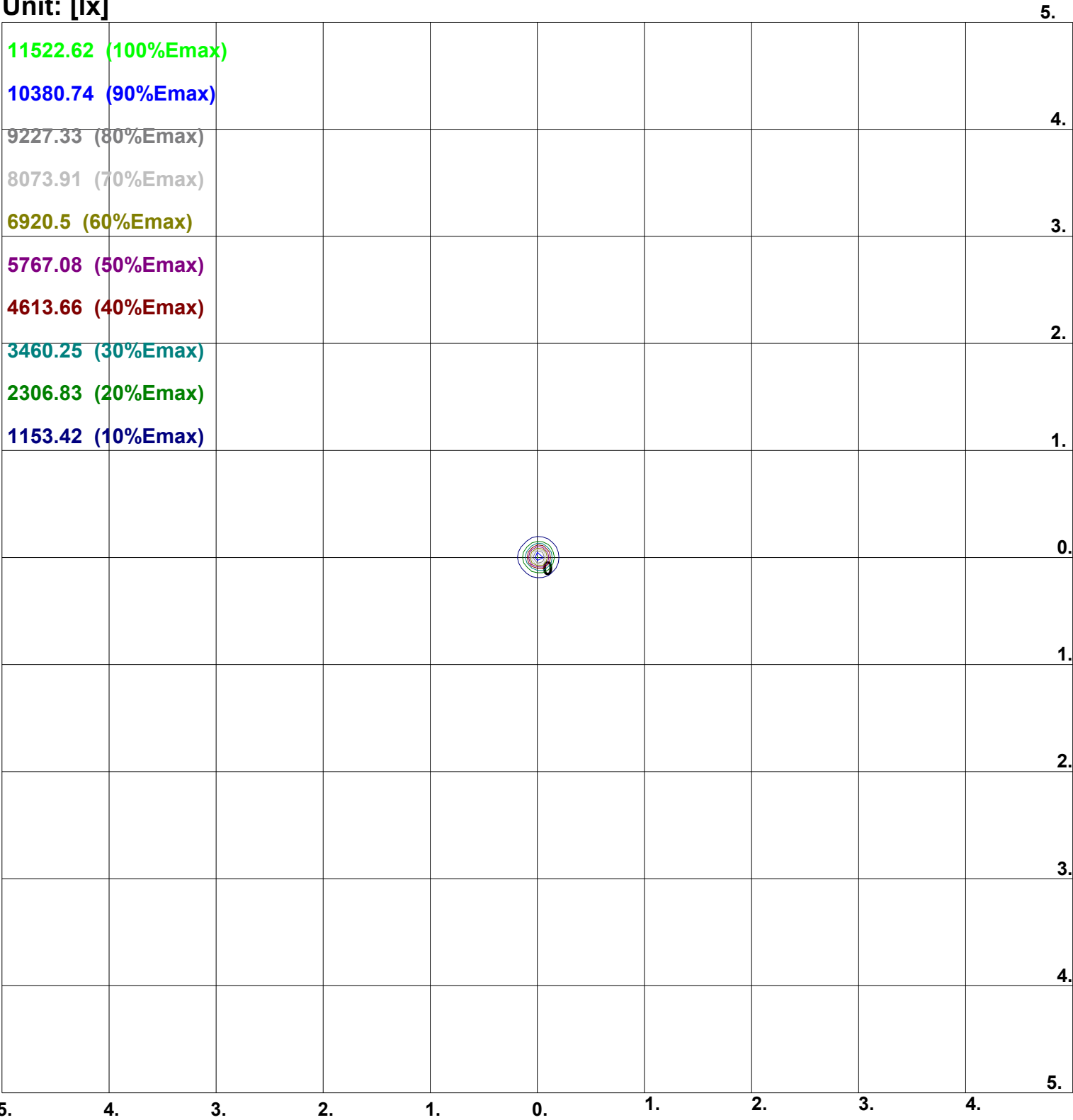
[illegible]

Light Distribution Curve [Unit: cd]



Horizontal cone through Max.cd [Unit: cd]





Coordinate Scale: d/h

Height: 2 m

Max Illuminance : 11534.16lx

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

Diameter: 140mm

Length: -140mm

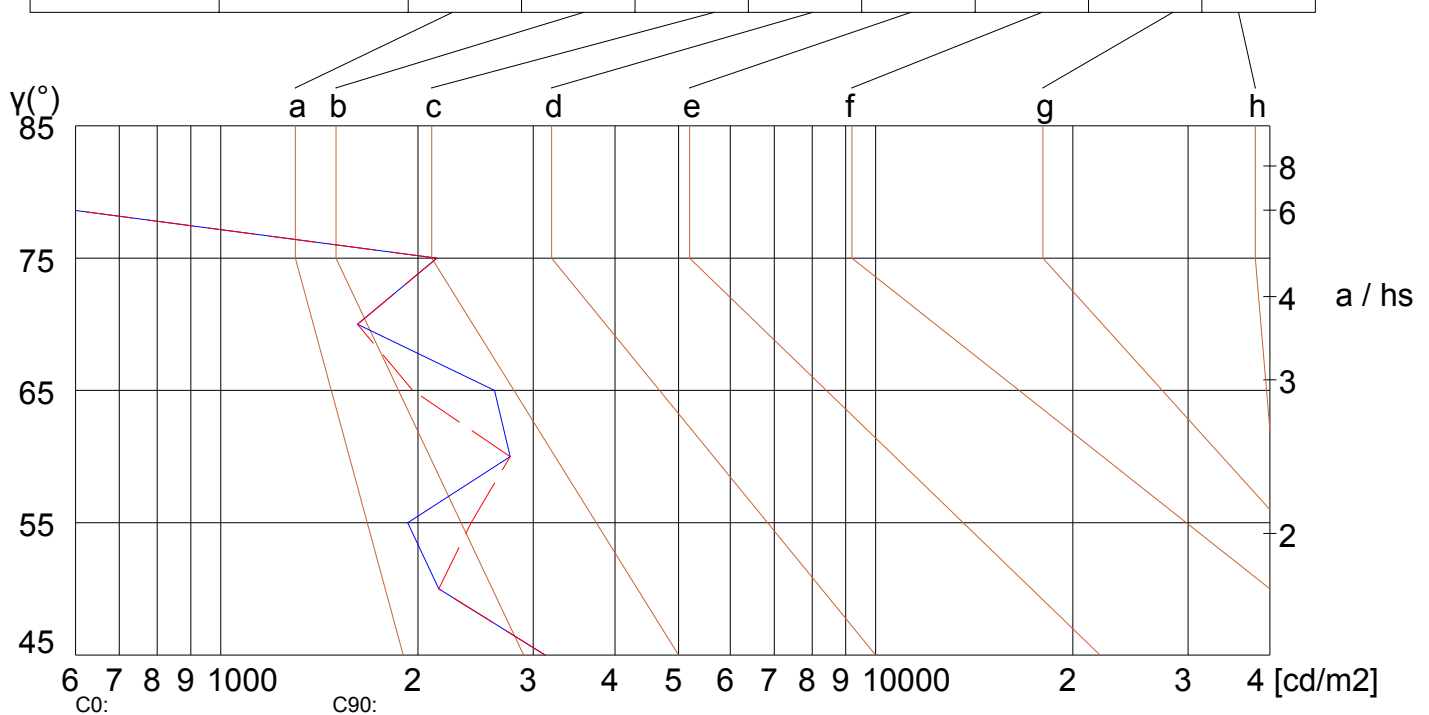
Width: -140mm

Height: 100mm

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

$\gamma$	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	3129	2152	2411	2766	1963	1617	2137		
C90	3129	2152	1929	2766	2618	1617	2137		

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 900mA 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	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	1.05	1.04	1.04	1.03	1.02	1.02	0.99	0.98	0.97	0.94	0.93	0.92	0.87	0.86	0.85	0.81
2	1.01	1.00	1.00	0.99	0.98	0.98	0.95	0.94	0.93	0.91	0.90	0.88	0.85	0.84	0.82	0.78
3	0.98	0.97	0.96	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.86	0.85	0.83	0.81	0.80	0.76
4	0.95	0.94	0.93	0.93	0.92	0.91	0.90	0.88	0.87	0.86	0.84	0.82	0.81	0.79	0.77	0.73
5	0.92	0.91	0.91	0.90	0.89	0.88	0.87	0.85	0.84	0.83	0.81	0.80	0.79	0.77	0.75	0.71
6	0.89	0.89	0.88	0.88	0.87	0.86	0.85	0.83	0.82	0.81	0.79	0.77	0.77	0.75	0.73	0.69
7	0.87	0.86	0.86	0.86	0.84	0.84	0.83	0.81	0.80	0.79	0.77	0.75	0.76	0.73	0.71	0.68
8	0.85	0.84	0.84	0.83	0.82	0.82	0.81	0.79	0.78	0.77	0.75	0.73	0.74	0.71	0.69	0.66
9	0.83	0.82	0.82	0.82	0.80	0.80	0.79	0.77	0.76	0.76	0.73	0.72	0.72	0.70	0.67	0.64
10	0.81	0.80	0.80	0.80	0.79	0.78	0.77	0.75	0.74	0.74	0.72	0.70	0.71	0.68	0.66	0.63

