

**R854 WNL (CRI90 900mA 70D)**

Luminaire Name: R854 WNL (CRI90 900mA 70D)

Report NO.: 01313217032410A

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: 230.34 V

Current: 0.1557 A

Power: 34.888 W

Power Factor: 0.9727

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

Width: -140mm

Height: 100mm

Optical Component: 70D Reflector DC(V:35.61V I:0.906A P:32.26W)

**Photometric Results**

Lumens: 3392.19 lm

Efficiency: 86.51%

Central Intensity: 2507.97cd

Maximum Intensity: 2611.186cd

Beam Angle(10%): Left: -58.4 Right:46.7

Maximum s/h: C0\_180: 0.6 C90\_270: 0.59

Effective Luminous Flux: 3229.62 lm

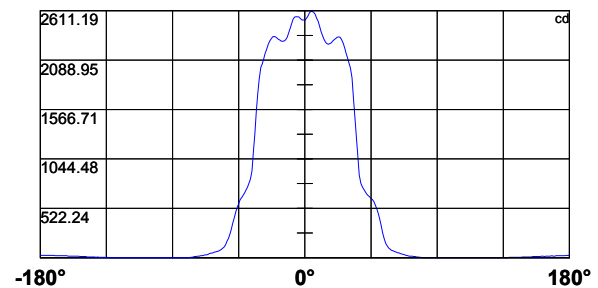
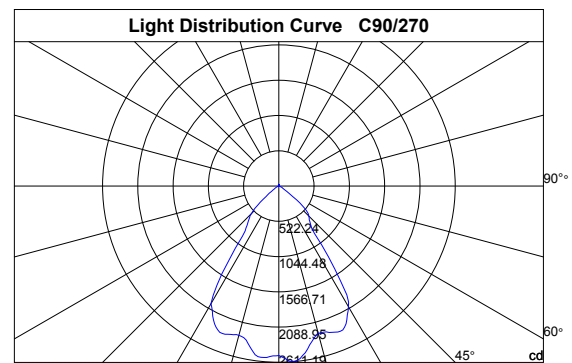
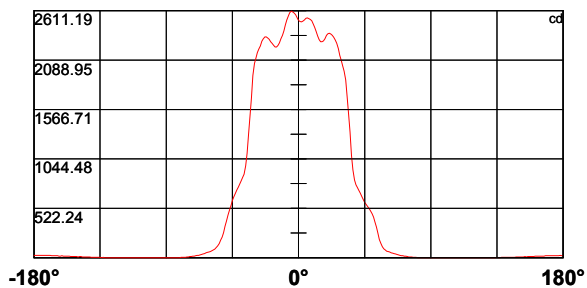
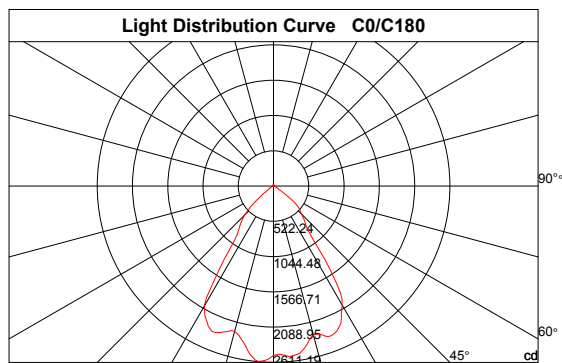
Angle of maximum intensity: C:150.0 G:5.0

Half Peak Side Angle(50%): Left: -40.0 Right:28.9

Up Flux Rate: 0.49%

Down Flux Rate: 86.02%

CIE Classification: Direct



**R854 WNL (CRI90 900mA 70D)**

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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	2508.0	2496.2	2491.9	2500.4	2513.2	2530.3	2534.5	2526.0	2517.5	2504.7
30.0	2508.0	2509.0	2517.5	2530.3	2551.6	2560.1	2555.8	2534.5	2513.2	2479.1
60.0	2508.0	2517.5	2543.0	2564.3	2581.4	2581.4	2568.6	2551.6	2521.7	2496.2
90.0	2508.0	2530.3	2551.6	2585.6	2602.7	2602.7	2594.1	2572.8	2530.3	2500.4
120.0	2508.0	2517.5	2551.6	2572.8	2585.6	2602.7	2594.1	2572.8	2517.5	2470.6
150.0	2508.0	2534.5	2564.3	2581.4	2598.4	2611.2	2602.7	2577.1	2526.0	2474.9
180.0	2508.0	2538.8	2568.6	2585.6	2598.4	2606.9	2589.9	2551.6	2513.2	2462.1
210.0	2508.0	2530.3	2555.8	2577.1	2594.1	2585.6	2564.3	2530.3	2487.7	2445.1
240.0	2508.0	2521.7	2534.5	2551.6	2568.6	2568.6	2555.8	2521.7	2487.7	2445.1
270.0	2508.0	2513.2	2513.2	2526.0	2543.0	2547.3	2547.3	2543.0	2521.7	2474.9
300.0	2508.0	2479.1	2474.9	2474.9	2483.4	2483.4	2483.4	2483.4	2483.4	2479.1
330.0	2508.0	2483.4	2474.9	2474.9	2483.4	2491.9	2500.4	2504.7	2504.7	2496.2
360.0	2508.0	2496.2	2491.9	2500.4	2513.2	2530.3	2534.5	2526.0	2517.5	2504.7

C\γ	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0	18.0	19.0
0.0	2470.6	2436.5	2393.9	2342.8	2304.5	2283.2	2283.2	2291.7	2313.0	2351.3
30.0	2453.6	2423.8	2376.9	2330.0	2300.2	2283.2	2283.2	2296.0	2317.3	2338.6
60.0	2445.1	2402.5	2364.1	2313.0	2287.4	2270.4	2274.7	2278.9	2296.0	2317.3
90.0	2449.3	2393.9	2351.3	2308.7	2278.9	2261.9	2257.6	2261.9	2270.4	2291.7
120.0	2419.5	2359.9	2313.0	2274.7	2244.9	2236.3	2232.1	2244.9	2261.9	2278.9
150.0	2402.5	2351.3	2308.7	2266.2	2240.6	2227.8	2223.6	2232.1	2249.1	2270.4
180.0	2398.2	2351.3	2313.0	2270.4	2244.9	2227.8	2227.8	2244.9	2266.2	2283.2
210.0	2402.5	2351.3	2313.0	2270.4	2249.1	2232.1	2240.6	2266.2	2296.0	2313.0
240.0	2393.9	2351.3	2317.3	2283.2	2266.2	2261.9	2270.4	2287.4	2300.2	2308.7
270.0	2428.0	2381.2	2330.0	2304.5	2291.7	2287.4	2287.4	2300.2	2308.7	2321.5
300.0	2449.3	2415.2	2368.4	2308.7	2287.4	2274.7	2274.7	2278.9	2287.4	2291.7
330.0	2479.1	2432.3	2376.9	2330.0	2291.7	2274.7	2274.7	2283.2	2304.5	2317.3
360.0	2470.6	2436.5	2393.9	2342.8	2304.5	2283.2	2283.2	2291.7	2313.0	2351.3

C\γ	20.0	21.0	22.0	23.0	24.0	25.0	26.0	27.0	28.0	29.0
0.0	2368.4	2372.6	2364.1	2351.3	2330.0	2300.2	2266.2	2210.8	2138.4	2087.2
30.0	2355.6	2368.4	2372.6	2368.4	2342.8	2313.0	2274.7	2223.6	2176.7	2129.8
60.0	2330.0	2351.3	2364.1	2368.4	2364.1	2347.1	2325.8	2266.2	2210.8	2163.9
90.0	2304.5	2317.3	2330.0	2334.3	2330.0	2304.5	2270.4	2219.3	2159.7	2112.8
120.0	2300.2	2313.0	2313.0	2304.5	2283.2	2240.6	2189.5	2142.6	2091.5	2040.4
150.0	2287.4	2304.5	2313.0	2308.7	2287.4	2261.9	2219.3	2168.2	2117.1	2070.2
180.0	2308.7	2321.5	2334.3	2334.3	2313.0	2287.4	2240.6	2206.5	2168.2	2108.5
210.0	2334.3	2342.8	2347.1	2330.0	2296.0	2261.9	2219.3	2168.2	2134.1	2087.2
240.0	2313.0	2317.3	2313.0	2304.5	2270.4	2240.6	2193.7	2151.1	2108.5	2048.9
270.0	2334.3	2338.6	2334.3	2313.0	2287.4	2253.4	2206.5	2159.7	2100.0	2048.9
300.0	2296.0	2300.2	2296.0	2287.4	2270.4	2240.6	2189.5	2138.4	2091.5	2040.4
330.0	2330.0	2338.6	2330.0	2321.5	2304.5	2274.7	2253.4	2210.8	2142.6	2091.5
360.0	2368.4	2372.6	2364.1	2351.3	2330.0	2300.2	2266.2	2210.8	2138.4	2087.2

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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	2027.6	1972.2	1878.5	1699.6	1516.4	1329.0	1082.0	928.6	822.1	771.0
30.0	2061.7	2014.8	1929.6	1763.5	1580.3	1384.4	1116.0	937.1	809.3	741.2
60.0	2117.1	2065.9	1968.0	1814.6	1584.6	1384.4	1103.3	954.2	826.4	758.2
90.0	2057.4	2006.3	1899.8	1682.6	1482.4	1277.9	1077.7	873.2	788.0	749.7
120.0	1989.3	1865.7	1742.2	1486.6	1277.9	1090.5	915.8	826.4	792.3	754.0
150.0	2002.1	1891.3	1669.8	1482.4	1294.9	1099.0	966.9	890.3	847.7	813.6
180.0	2053.2	1925.4	1686.8	1495.1	1303.5	1103.3	971.2	881.8	847.7	813.6
210.0	2002.1	1870.0	1703.9	1482.4	1290.7	1060.7	937.1	860.5	817.9	788.0
240.0	1989.3	1865.7	1674.1	1490.9	1273.6	1086.2	937.1	822.1	792.3	758.2
270.0	2010.6	1887.0	1733.7	1546.3	1307.7	1124.6	915.8	830.6	788.0	745.4
300.0	2002.1	1959.5	1848.7	1699.6	1444.0	1235.3	1069.2	886.0	809.3	771.0
330.0	2031.9	1980.8	1891.3	1686.8	1503.7	1312.0	1094.7	941.4	843.4	800.8
360.0	2027.6	1972.2	1878.5	1699.6	1516.4	1329.0	1082.0	928.6	822.1	771.0

C\γ	40.0	41.0	42.0	43.0	44.0	45.0	46.0	47.0	48.0	49.0
0.0	741.2	711.4	681.5	647.5	613.4	583.6	562.3	541.0	519.7	494.1
30.0	694.3	651.7	626.2	604.9	592.1	575.1	566.5	558.0	545.2	523.9
60.0	715.6	681.5	656.0	639.0	626.2	613.4	604.9	587.8	566.5	536.7
90.0	724.1	698.6	673.0	656.0	643.2	626.2	613.4	592.1	553.8	515.4
120.0	732.7	698.6	677.3	651.7	626.2	604.9	579.3	541.0	494.1	447.3
150.0	775.3	745.4	719.9	694.3	660.3	626.2	587.8	545.2	502.6	430.2
180.0	779.5	745.4	715.6	677.3	643.2	604.9	549.5	502.6	451.5	387.6
210.0	758.2	724.1	694.3	656.0	609.1	570.8	519.7	472.8	417.4	353.6
240.0	728.4	694.3	668.8	630.4	596.4	549.5	506.9	455.8	391.9	336.5
270.0	715.6	685.8	660.3	634.7	613.4	570.8	532.5	485.6	426.0	366.3
300.0	736.9	711.4	685.8	647.5	626.2	604.9	570.8	536.7	498.4	447.3
330.0	775.3	741.2	711.4	677.3	647.5	621.9	592.1	566.5	532.5	485.6
360.0	741.2	711.4	681.5	647.5	613.4	583.6	562.3	541.0	519.7	494.1

C\γ	50.0	51.0	52.0	53.0	54.0	55.0	56.0	57.0	58.0	59.0
0.0	464.3	430.2	374.9	323.7	259.8	191.7	149.1	115.0	93.7	80.9
30.0	481.3	447.3	374.9	311.0	247.1	191.7	140.6	115.0	89.5	80.9
60.0	489.9	443.0	383.4	298.2	242.8	187.4	144.8	119.3	93.7	85.2
90.0	460.0	400.4	332.3	255.6	200.2	153.3	123.5	102.2	89.5	76.7
120.0	379.1	319.5	259.8	200.2	161.9	123.5	102.2	89.5	76.7	72.4
150.0	370.6	311.0	242.8	200.2	166.1	132.1	115.0	93.7	80.9	72.4
180.0	332.3	264.1	217.2	187.4	149.1	123.5	106.5	89.5	80.9	72.4
210.0	298.2	247.1	195.9	161.9	132.1	110.8	93.7	85.2	76.7	68.2
240.0	281.1	217.2	187.4	157.6	123.5	102.2	89.5	80.9	72.4	68.2
270.0	302.4	247.1	204.5	174.6	136.3	110.8	98.0	85.2	76.7	68.2
300.0	396.2	319.5	264.1	217.2	178.9	140.6	115.0	93.7	85.2	72.4
330.0	447.3	404.7	345.0	281.1	230.0	174.6	140.6	115.0	93.7	80.9
360.0	464.3	430.2	374.9	323.7	259.8	191.7	149.1	115.0	93.7	80.9

**R854 WNL (CRI90 900mA 70D)****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	68.2	63.9	59.6	51.1	46.9	42.6	38.3	34.1	29.8	25.6
30.0	68.2	63.9	55.4	51.1	46.9	42.6	38.3	34.1	29.8	25.6
60.0	72.4	63.9	59.6	51.1	46.9	42.6	38.3	34.1	29.8	25.6
90.0	72.4	63.9	59.6	51.1	51.1	42.6	38.3	34.1	29.8	25.6
120.0	63.9	59.6	55.4	51.1	46.9	42.6	34.1	29.8	29.8	25.6
150.0	63.9	59.6	55.4	51.1	46.9	42.6	34.1	29.8	25.6	21.3
180.0	63.9	59.6	55.4	51.1	42.6	38.3	34.1	29.8	25.6	25.6
210.0	63.9	55.4	55.4	51.1	42.6	38.3	34.1	34.1	25.6	25.6
240.0	63.9	55.4	51.1	46.9	42.6	38.3	34.1	29.8	25.6	21.3
270.0	63.9	59.6	55.4	46.9	46.9	42.6	34.1	29.8	29.8	25.6
300.0	68.2	59.6	55.4	51.1	46.9	42.6	38.3	29.8	29.8	25.6
330.0	72.4	63.9	59.6	51.1	46.9	46.9	38.3	34.1	29.8	25.6
360.0	68.2	63.9	59.6	51.1	46.9	42.6	38.3	34.1	29.8	25.6

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

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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 70D)****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	4.3	0.0	0.0	4.3	4.3
30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	4.3
60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3
90.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3
120.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3	4.3	4.3
150.0	0.0	0.0	0.0	0.0	0.0	4.3	4.3	4.3	4.3	4.3
180.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3	4.3	4.3	4.3
210.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3	4.3	4.3
240.0	0.0	0.0	0.0	0.0	4.3	4.3	4.3	4.3	4.3	4.3
270.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3	4.3	4.3
300.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3
330.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	4.3	4.3
360.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	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	4.3	4.3	4.3	4.3	4.3	8.5	8.5
30.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	8.5
60.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	8.5	8.5	8.5
90.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	8.5	8.5
120.0	4.3	4.3	4.3	8.5	8.5	8.5	8.5	8.5	8.5	8.5
150.0	4.3	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	12.8
180.0	4.3	4.3	8.5	8.5	8.5	8.5	8.5	8.5	12.8	12.8
210.0	4.3	4.3	8.5	4.3	8.5	8.5	8.5	8.5	8.5	12.8
240.0	4.3	4.3	8.5	4.3	8.5	8.5	8.5	8.5	12.8	12.8
270.0	4.3	8.5	4.3	8.5	8.5	8.5	8.5	8.5	8.5	12.8
300.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	8.5	8.5	8.5
330.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	8.5	8.5
360.0	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	8.5	8.5

**R854 WNL (CRI90 900mA 70D)****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	8.5	8.5	8.5	8.5	12.8	8.5	12.8	12.8	12.8	12.8
30.0	8.5	8.5	8.5	8.5	8.5	8.5	12.8	12.8	12.8	12.8
60.0	8.5	8.5	8.5	8.5	8.5	12.8	12.8	12.8	12.8	12.8
90.0	8.5	8.5	8.5	8.5	8.5	12.8	12.8	12.8	12.8	12.8
120.0	12.8	12.8	12.8	12.8	17.0	17.0	17.0	17.0	17.0	17.0
150.0	12.8	12.8	12.8	12.8	12.8	17.0	17.0	17.0	17.0	17.0
180.0	8.5	12.8	12.8	12.8	12.8	12.8	17.0	17.0	17.0	17.0
210.0	12.8	12.8	12.8	12.8	17.0	17.0	17.0	17.0	17.0	17.0
240.0	12.8	12.8	12.8	17.0	17.0	12.8	17.0	17.0	17.0	17.0
270.0	12.8	12.8	12.8	12.8	17.0	17.0	17.0	17.0	17.0	17.0
300.0	8.5	8.5	8.5	8.5	8.5	12.8	12.8	12.8	12.8	12.8
330.0	8.5	8.5	12.8	8.5	8.5	12.8	12.8	12.8	12.8	12.8
360.0	8.5	8.5	8.5	8.5	12.8	8.5	12.8	12.8	12.8	12.8

C\γ	160.0	161.0	162.0	163.0	164.0	165.0	166.0	167.0	168.0	169.0
0.0	12.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	21.3	21.3
30.0	12.8	12.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
60.0	12.8	12.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	21.3
90.0	12.8	17.0	17.0	12.8	17.0	17.0	17.0	17.0	21.3	17.0
120.0	17.0	17.0	17.0	17.0	21.3	21.3	21.3	21.3	21.3	21.3
150.0	17.0	17.0	17.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3
180.0	17.0	21.3	17.0	17.0	21.3	21.3	21.3	21.3	21.3	25.6
210.0	17.0	17.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3
240.0	21.3	21.3	17.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3
270.0	17.0	17.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3
300.0	12.8	12.8	12.8	17.0	17.0	17.0	17.0	17.0	17.0	21.3
330.0	12.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
360.0	12.8	17.0	17.0	17.0	17.0	17.0	17.0	17.0	21.3	21.3

C\γ	170.0	171.0	172.0	173.0	174.0	175.0	176.0	177.0	178.0	179.0
0.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	25.6	21.3
30.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3
60.0	21.3	21.3	21.3	21.3	21.3	21.3	25.6	25.6	21.3	25.6
90.0	17.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3	25.6	25.6
120.0	21.3	21.3	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
150.0	25.6	21.3	25.6	25.6	25.6	21.3	21.3	25.6	21.3	25.6
180.0	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
210.0	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
240.0	21.3	21.3	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
270.0	21.3	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
300.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3	25.6	25.6	25.6
330.0	21.3	21.3	17.0	21.3	21.3	21.3	21.3	21.3	25.6	25.6
360.0	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	25.6	21.3

Intensity Data [cd]		Page8
C\γ	180.0	
0.0	25.6	
30.0	25.6	
60.0	25.6	
90.0	25.6	
120.0	25.6	
150.0	25.6	
180.0	25.6	
210.0	25.6	
240.0	25.6	
270.0	25.6	
300.0	25.6	
330.0	25.6	
360.0	25.6	

**R854 WNL (CRI90 900mA 70D)**

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	2507.97	0.00	0.00	0.00	0.00
1	2514.28	2.40	2.40	2.40	2.40
2	2528.48	7.24	9.64	7.24	9.64
3	2543.74	12.13	21.77	12.13	21.77
4	2558.65	17.08	38.85	17.08	38.85
5	2564.33	22.04	60.89	22.04	60.89
6	2557.59	26.92	87.81	26.92	87.81
7	2539.13	31.64	119.44	31.64	119.44
8	2510.37	36.14	155.58	36.14	155.58
9	2477.36	40.42	196.00	40.42	196.00
10	2432.63	44.43	240.44	44.43	240.44
11	2387.55	48.16	288.60	48.16	288.60
12	2343.89	51.72	340.32	51.72	340.32
13	2300.23	55.11	395.44	55.11	395.44
14	2273.96	58.55	453.99	58.55	453.99
15	2260.12	62.25	516.23	62.25	516.23
16	2260.83	66.24	582.48	66.24	582.48
17	2272.19	70.59	653.07	70.59	653.07
18	2289.23	75.21	728.27	75.21	728.27
19	2306.97	79.96	808.24	79.96	808.24
20	2321.88	84.72	892.96	84.72	892.96
21	2332.18	89.37	982.33	89.37	982.33
22	2334.31	93.77	1076.10	93.77	1076.10
23	2327.21	97.81	1173.91	97.81	1173.91
24	2306.62	101.31	1275.23	101.31	1275.23
25	2277.16	104.23	1379.45	104.23	1379.45
26	2237.40	106.57	1486.02	106.57	1486.02
27	2188.77	108.29	1594.30	108.29	1594.30
28	2136.59	109.51	1703.81	109.51	1703.81
29	2085.83	110.47	1814.28	110.47	1814.28
30	2028.67	111.09	1925.37	111.09	1925.37
31	1942.06	110.50	2035.87	110.50	2035.87
32	1802.20	107.27	2143.14	107.27	2143.14
33	1610.87	100.55	2243.69	100.55	2243.69
34	1404.99	91.27	2334.96	91.27	2334.96
35	1207.27	81.13	2416.09	81.13	2416.09
36	1015.58	70.78	2486.86	70.78	2486.86
37	886.01	62.02	2548.88	62.02	2548.88
38	815.37	56.79	2605.67	56.79	2605.67
39	772.07	54.18	2659.86	54.18	2659.86
40	739.77	52.73	2712.58	52.73	2712.58

**R854 WNL (CRI90 900mA 70D)**

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	707.46	51.54	2764.12	51.54	2764.12
42	680.84	50.44	2814.56	50.44	2814.56
43	651.38	49.35	2863.91	49.35	2863.91
44	624.75	48.16	2912.07	48.16	2912.07
45	596.00	46.92	2958.99	46.92	2958.99
46	565.47	45.42	3004.41	45.42	3004.41
47	532.11	43.65	3048.06	43.65	3048.06
48	491.64	41.39	3089.45	41.39	3089.45
49	443.72	38.41	3127.86	38.41	3127.86
50	391.89	34.84	3162.70	34.84	3162.70
51	337.58	30.86	3193.56	29.02	3191.72
52	281.85	26.58	3220.14	18.18	3209.90
53	230.73	22.30	3242.44	13.60	3223.50
54	185.65	18.35	3260.79	6.13	3229.62
55	145.18	14.77	3275.56	0.00	3229.62
56	118.21	11.90	3287.46	0.00	3229.62
57	98.68	9.92	3297.38	0.00	3229.62
58	84.13	8.45	3305.83	0.00	3229.62
59	74.90	7.43	3313.27	0.00	3229.62
60	67.09	6.71	3319.98	0.00	3229.62
61	60.70	6.10	3326.07	0.00	3229.62
62	56.44	5.64	3331.72	0.00	3229.62
63	50.41	5.20	3336.92	0.00	3229.62
64	46.15	4.74	3341.65	0.00	3229.62
65	41.89	4.36	3346.01	0.00	3229.62
66	36.21	3.90	3349.91	0.00	3229.62
67	31.95	3.43	3353.33	0.00	3229.62
68	28.40	3.06	3356.39	0.00	3229.62
69	24.85	2.72	3359.11	0.00	3229.62
70	21.30	2.37	3361.48	0.00	3229.62
71	18.46	2.05	3363.53	0.00	3229.62
72	17.04	1.85	3365.38	0.00	3229.62
73	14.55	1.65	3367.03	0.00	3229.62
74	12.78	1.44	3368.47	0.00	3229.62
75	10.29	1.22	3369.69	0.00	3229.62
76	8.52	1.00	3370.68	0.00	3229.62
77	6.39	0.79	3371.48	0.00	3229.62
78	4.26	0.57	3372.05	0.00	3229.62
79	3.90	0.44	3372.49	0.00	3229.62
80	2.48	0.34	3372.83	0.00	3229.62
81	1.42	0.21	3373.04	0.00	3229.62

**R854 WNL (CRI90 900mA 70D)**

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	0.08	3373.12	0.00	3229.62
83	0.00	0.00	3373.12	0.00	3229.62
84	0.00	0.00	3373.12	0.00	3229.62
85	0.00	0.00	3373.12	0.00	3229.62
86	0.00	0.00	3373.12	0.00	3229.62
87	0.00	0.00	3373.12	0.00	3229.62
88	0.00	0.00	3373.12	0.00	3229.62
89	0.00	0.00	3373.12	0.00	3229.62
90	0.00	0.00	3373.12	0.00	3229.62
91	0.00	0.00	3373.12	0.00	3229.62
92	0.00	0.00	3373.12	0.00	3229.62
93	0.00	0.00	3373.12	0.00	3229.62
94	0.00	0.00	3373.12	0.00	3229.62
95	0.00	0.00	3373.12	0.00	3229.62
96	0.00	0.00	3373.12	0.00	3229.62
97	0.00	0.00	3373.12	0.00	3229.62
98	0.00	0.00	3373.12	0.00	3229.62
99	0.00	0.00	3373.12	0.00	3229.62
100	0.00	0.00	3373.12	0.00	3229.62
101	0.00	0.00	3373.12	0.00	3229.62
102	0.00	0.00	3373.12	0.00	3229.62
103	0.00	0.00	3373.12	0.00	3229.62
104	0.00	0.00	3373.12	0.00	3229.62
105	0.00	0.00	3373.12	0.00	3229.62
106	0.00	0.00	3373.12	0.00	3229.62
107	0.00	0.00	3373.12	0.00	3229.62
108	0.00	0.00	3373.12	0.00	3229.62
109	0.00	0.00	3373.12	0.00	3229.62
110	0.00	0.00	3373.12	0.00	3229.62
111	0.00	0.00	3373.12	0.00	3229.62
112	0.00	0.00	3373.12	0.00	3229.62
113	0.00	0.00	3373.12	0.00	3229.62
114	0.00	0.00	3373.12	0.00	3229.62
115	0.00	0.00	3373.12	0.00	3229.62
116	0.00	0.00	3373.12	0.00	3229.62
117	0.00	0.00	3373.12	0.00	3229.62
118	0.00	0.00	3373.12	0.00	3229.62
119	0.00	0.00	3373.12	0.00	3229.62
120	0.00	0.00	3373.12	0.00	3229.62
121	0.00	0.00	3373.12	0.00	3229.62
122	0.00	0.00	3373.12	0.00	3229.62

**R854 WNL (CRI90 900mA 70D)**

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	3373.12	0.00	3229.62
124	0.00	0.00	3373.12	0.00	3229.62
125	0.00	0.00	3373.12	0.00	3229.62
126	0.00	0.00	3373.12	0.00	3229.62
127	0.00	0.00	3373.12	0.00	3229.62
128	0.00	0.00	3373.12	0.00	3229.62
129	0.00	0.00	3373.12	0.00	3229.62
130	0.00	0.00	3373.12	0.00	3229.62
131	0.00	0.00	3373.12	0.00	3229.62
132	0.00	0.00	3373.12	0.00	3229.62
133	0.35	0.01	3373.13	0.00	3229.62
134	1.42	0.07	3373.21	0.00	3229.62
135	1.42	0.11	3373.32	0.00	3229.62
136	2.84	0.16	3373.48	0.00	3229.62
137	2.48	0.20	3373.68	0.00	3229.62
138	3.55	0.22	3373.90	0.00	3229.62
139	4.26	0.28	3374.19	0.00	3229.62
140	4.26	0.30	3374.49	0.00	3229.62
141	4.97	0.32	3374.82	0.00	3229.62
142	5.68	0.36	3375.18	0.00	3229.62
143	5.68	0.38	3375.56	0.00	3229.62
144	6.39	0.39	3375.95	0.00	3229.62
145	6.39	0.41	3376.36	0.00	3229.62
146	6.39	0.40	3376.76	0.00	3229.62
147	7.10	0.41	3377.16	0.00	3229.62
148	8.87	0.47	3377.63	0.00	3229.62
149	10.29	0.55	3378.18	0.00	3229.62
150	10.29	0.57	3378.76	0.00	3229.62
151	10.65	0.57	3379.32	0.00	3229.62
152	11.00	0.57	3379.89	0.00	3229.62
153	11.00	0.56	3380.45	0.00	3229.62
154	12.42	0.57	3381.02	0.00	3229.62
155	13.49	0.61	3381.63	0.00	3229.62
156	14.91	0.65	3382.28	0.00	3229.62
157	14.91	0.65	3382.93	0.00	3229.62
158	14.91	0.63	3383.55	0.00	3229.62
159	14.91	0.60	3384.15	0.00	3229.62
160	15.26	0.58	3384.73	0.00	3229.62
161	16.68	0.58	3385.32	0.00	3229.62
162	17.39	0.59	3385.91	0.00	3229.62
163	18.10	0.59	3386.50	0.00	3229.62

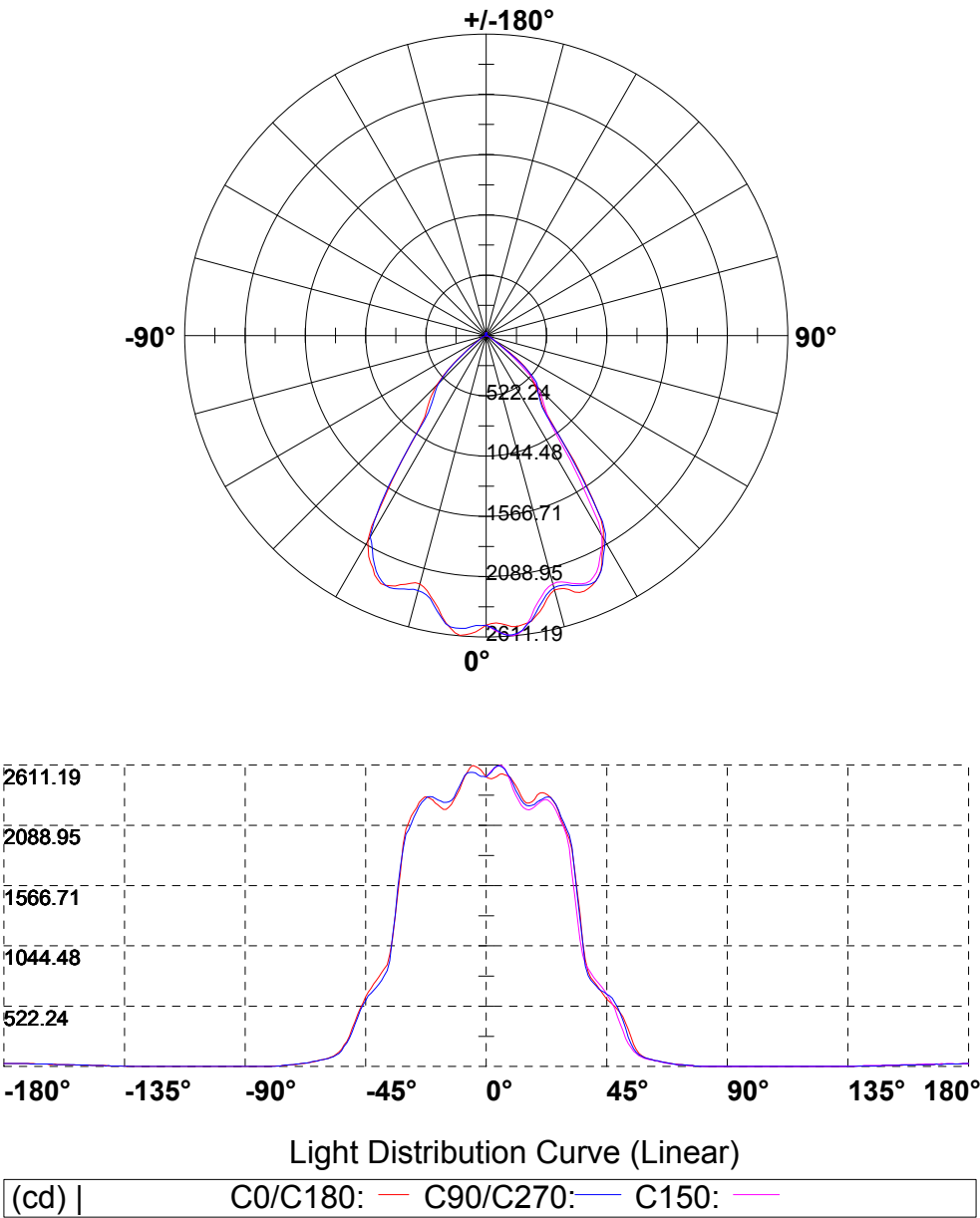
### R854 WNL (CRI90 900mA 70D)

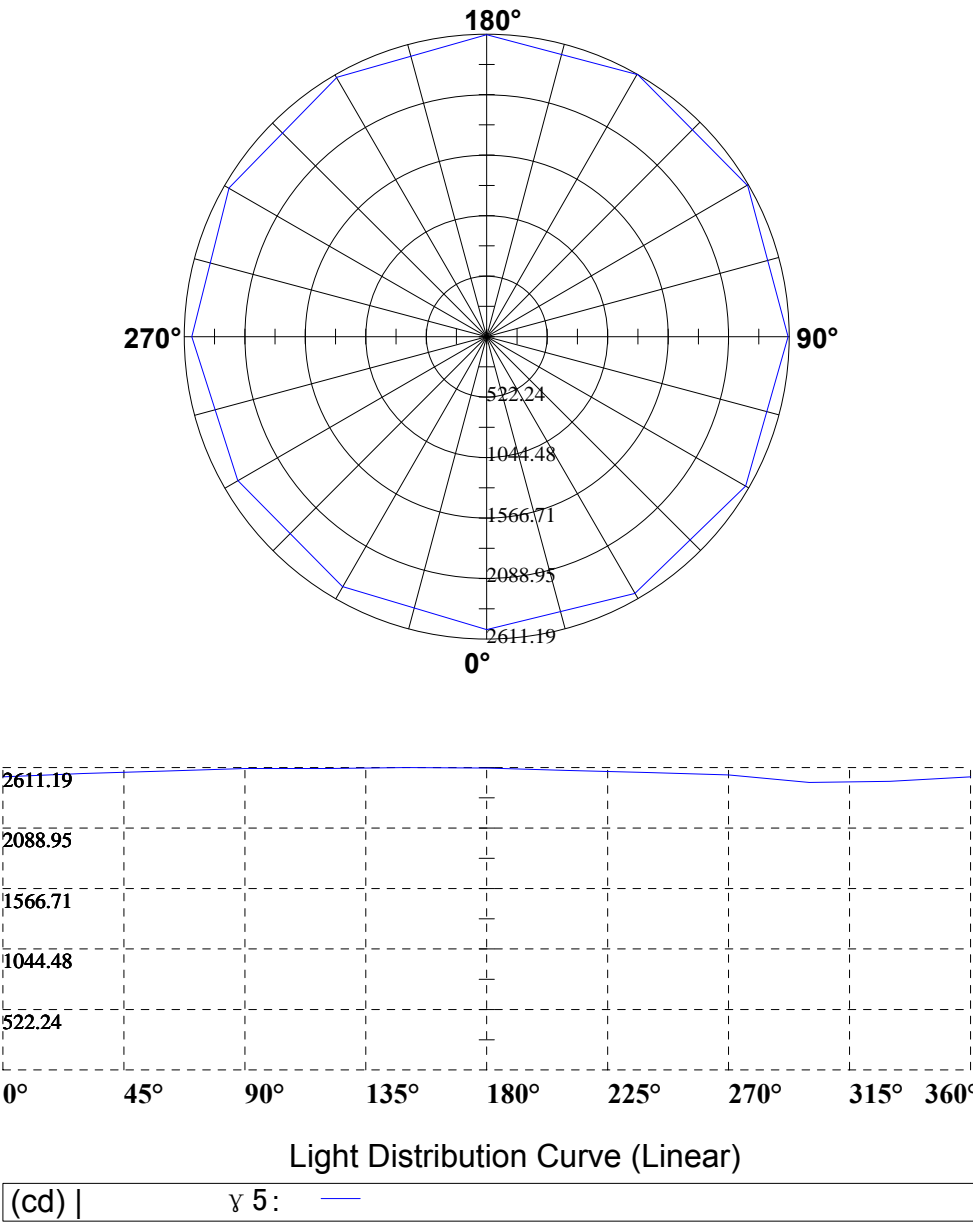
### Zonal flux distribution table

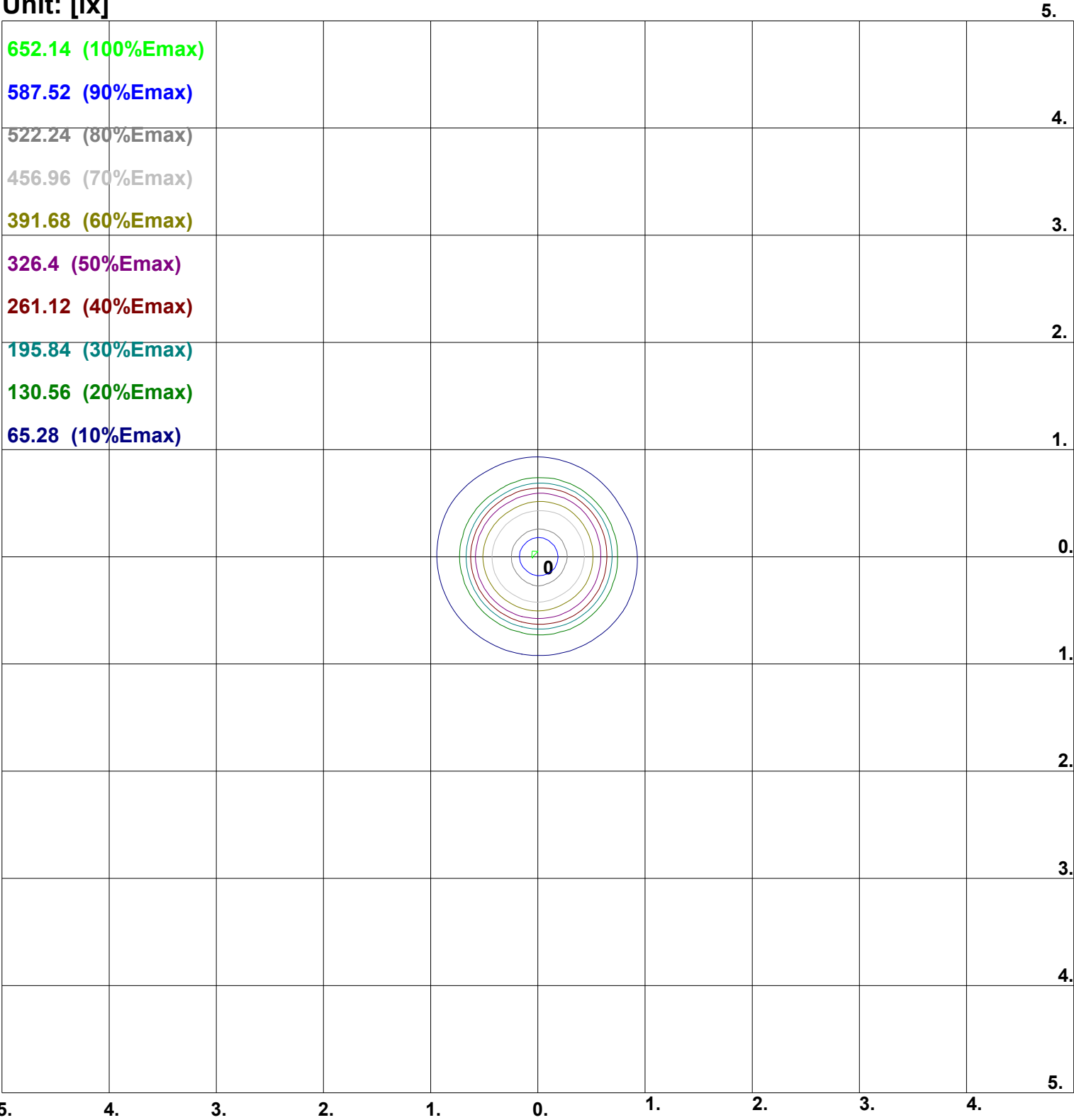
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[illegible]

Light Distribution Curve [Unit: cd]







Coordinate Scale: d/h  
Height: 2 m  
Max Illuminance : 652.8lx

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

Diameter: 140mm

Length: -140mm

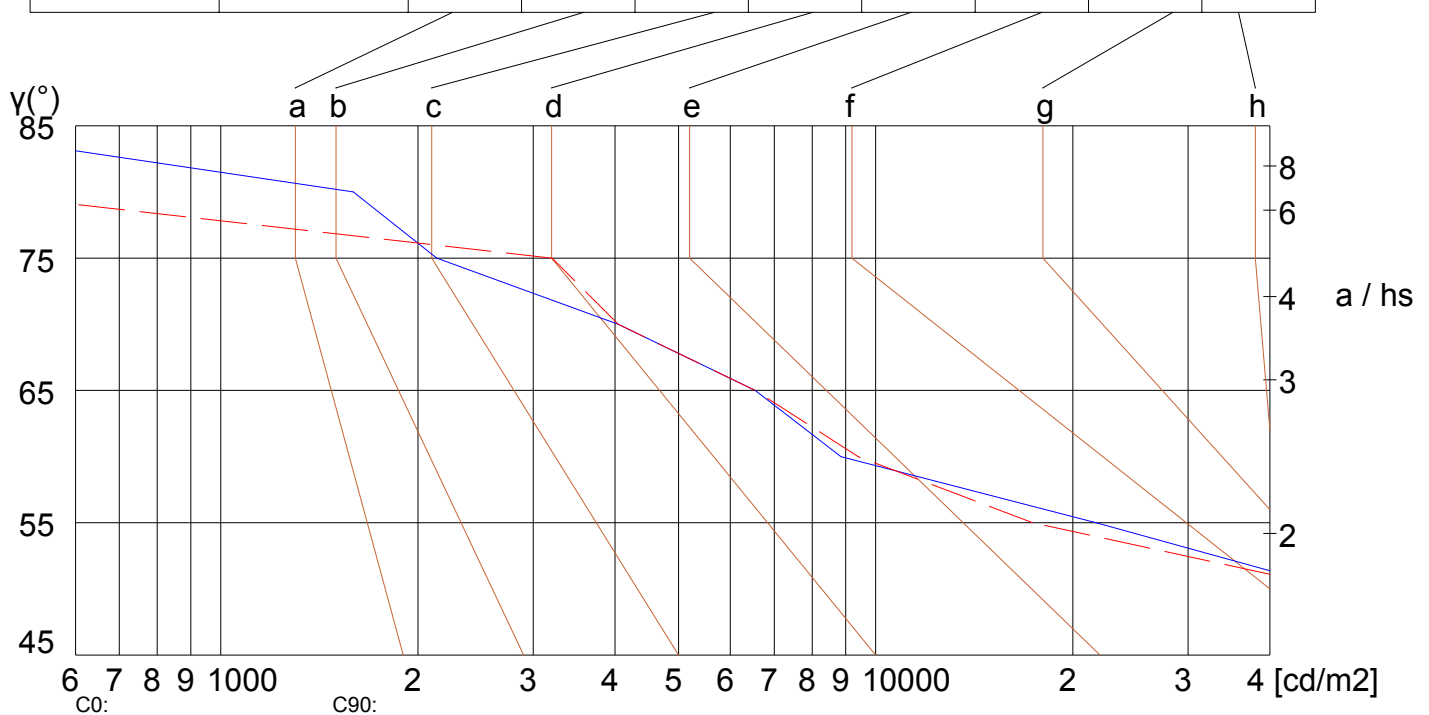
Width: -140mm

Height: 100mm

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

$\gamma$	45°	50°	55°	60°	65°	70°	75°	80°	85°
C0	57503	46474	17361	9404	6545	4044	3206	0	
C90	53591	46905	21701	8851	6545	4044	2137	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 900mA 70D)**

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	1.03	1.03	1.03	1.01	1.01	1.01	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.87
1	0.97	0.96	0.96	0.96	0.95	0.94	0.92	0.91	0.90	0.88	0.86	0.85	0.81	0.80	0.79	0.75
2	0.89	0.88	0.87	0.88	0.86	0.85	0.85	0.83	0.82	0.81	0.79	0.77	0.76	0.74	0.72	0.68
3	0.82	0.80	0.79	0.81	0.79	0.77	0.78	0.76	0.74	0.75	0.72	0.70	0.71	0.68	0.66	0.62
4	0.75	0.73	0.72	0.74	0.72	0.71	0.72	0.69	0.67	0.70	0.66	0.64	0.67	0.63	0.60	0.56
5	0.69	0.67	0.66	0.68	0.66	0.64	0.67	0.64	0.62	0.65	0.61	0.58	0.62	0.58	0.55	0.52
6	0.63	0.62	0.60	0.63	0.61	0.59	0.62	0.59	0.56	0.60	0.56	0.54	0.58	0.54	0.51	0.47
7	0.58	0.57	0.56	0.58	0.56	0.54	0.57	0.54	0.52	0.56	0.52	0.49	0.55	0.50	0.47	0.44
8	0.54	0.52	0.51	0.54	0.52	0.50	0.53	0.50	0.48	0.52	0.48	0.46	0.51	0.47	0.43	0.40
9	0.50	0.49	0.48	0.50	0.48	0.47	0.50	0.47	0.44	0.49	0.45	0.42	0.48	0.43	0.40	0.37
10	0.47	0.45	0.44	0.47	0.45	0.43	0.47	0.43	0.41	0.46	0.42	0.39	0.45	0.41	0.37	0.35

