

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735854

Luminaire Tested: S122DR-S1005D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735854  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/24/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DR-S1005D835-X4F0-XX-UDD-W-W  
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4464.7 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

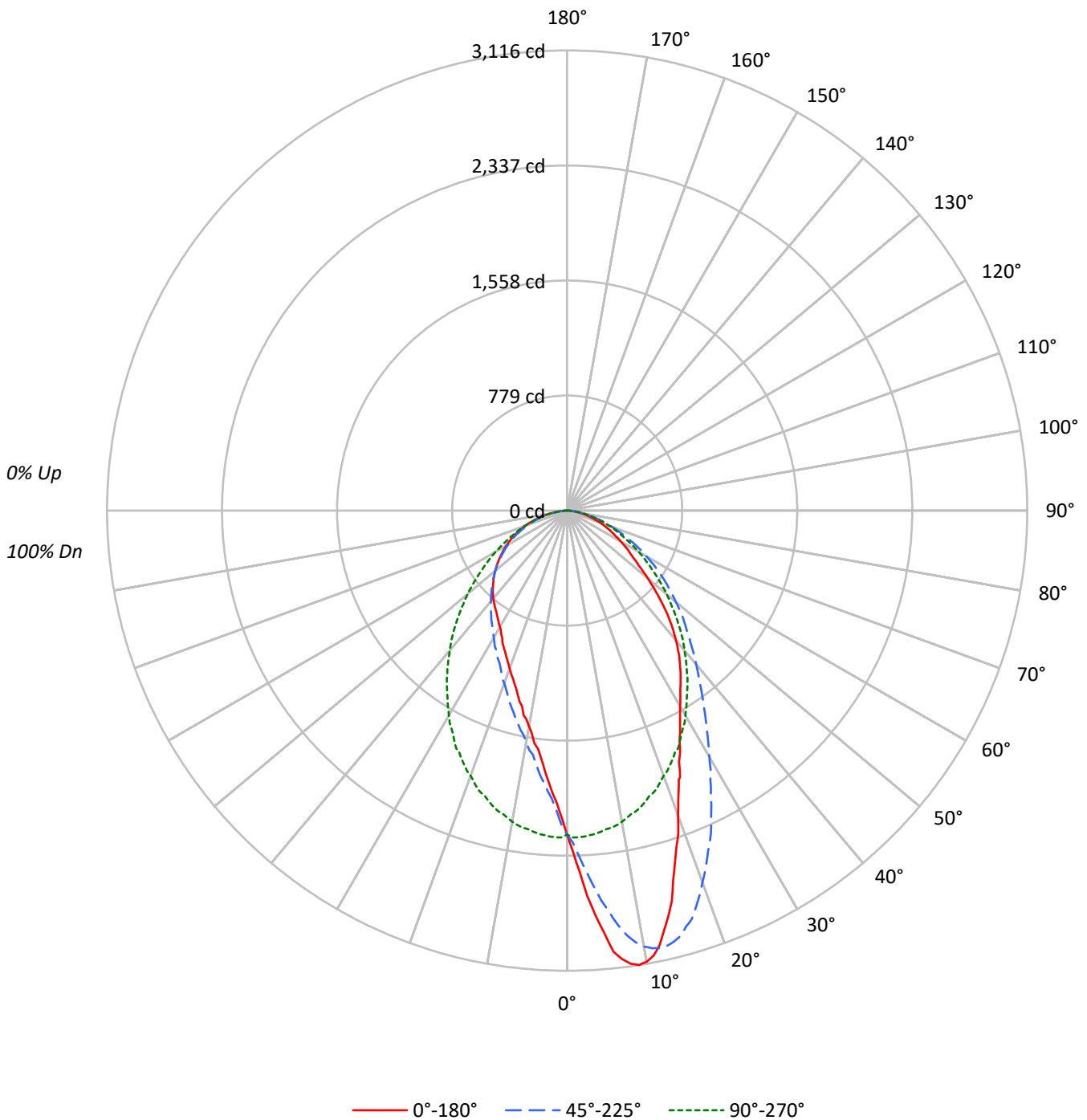
Input Watts (W): 41.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P735854

CATALOG NUMBER: S122DR-S1005D835-X4F0-XX-UDD-W-W

### Luminous Intensity Polar Plot



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76					74				
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58					56				
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51					49				
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46					44				
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41					39				
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37					35				
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34					32				
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31					30				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	42177	42177	42177	42177	42177
5°	55318	51127	42398	35558	33930
10°	60548	58518	41768	31084	28964
15°	54470	59272	40634	28060	25690
20°	44947	54819	39085	25450	23290
25°	38415	48904	37711	23541	21590
30°	33976	42712	35547	22059	20217
35°	31424	37830	33337	21020	19640
40°	28760	34132	31031	20131	19526
45°	25335	31157	28697	19515	19267
50°	21330	28728	26291	18985	19030
55°	17942	26434	23753	18347	18699
60°	16177	23888	21566	17799	18322
65°	14677	20990	19207	16942	17970
70°	13224	18135	17293	15680	17034
75°	11533	15343	14786	14222	15566
80°	9685	12021	12021	12353	13017
85°	7322	8645	8976	9638	9307

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 45752 cd/sqm



TEST NUMBER: P735854

CATALOG NUMBER: S122DR-S1005D835-X4F0-XX-UDD-W-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	215.9	4.8
10°-20°	592.7	13.3
20°-30°	777.3	17.4
30°-40°	821.5	18.4
40°-50°	762.7	17.1
50°-60°	610.5	13.7
60°-70°	417.5	9.4
70°-80°	215.4	4.8
80°-90°	51.2	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1585.9	35.5
0°-40°	2407.4	53.9
0°-60°	3780.6	84.7
0°-90°	4464.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4464.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2194	2194	2194	2194	2194	
5°	2867	2650	2197	1843	1758	282
15°	2737	2979	2042	1410	1291	751
25°	1811	2306	1778	1110	1018	835
35°	1339	1612	1421	896	837	836
45°	932	1146	1056	718	709	716
55°	535	789	709	548	558	490
65°	323	462	422	372	395	320
75°	155	207	199	192	210	165
85°	33	39	41	44	42	40
90°	0	0	0	0	0	

TEST NUMBER: P735854

CATALOG NUMBER: S122DR-S1005D835-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2194.3	2194.3	2194.3	2194.3	2194.3	2194.3	2194.3	2194.3	2194.3
1°	2315.0	2302.9	2250.1	2253.2	2213.9	2170.2	2129.5	2103.9	2082.7
2°	2450.7	2426.6	2343.6	2302.9	2213.9	2120.4	2036.0	2013.4	1984.7
3°	2615.1	2557.8	2443.2	2346.7	2210.9	2075.2	1959.1	1918.4	1913.8
4°	2747.8	2696.5	2544.2	2391.9	2203.4	2031.5	1900.3	1856.5	1835.4
5°	2867.0	2833.8	2649.8	2449.2	2197.4	1989.2	1842.9	1782.6	1758.5
6°	3004.2	2936.3	2734.3	2506.5	2186.8	1948.5	1791.7	1719.3	1686.1
7°	3060.0	3017.8	2829.3	2544.2	2173.2	1901.8	1726.8	1648.4	1624.3
8°	3099.2	3082.6	2904.7	2606.1	2167.2	1858.0	1669.5	1621.2	1592.6
9°	3115.8	3102.2	2959.0	2631.7	2156.6	1835.4	1640.9	1560.9	1529.3
10°	3102.2	3108.3	2998.2	2670.9	2140.0	1788.7	1592.6	1523.2	1484.0
11°	3070.6	3085.6	3019.3	2716.2	2118.9	1750.9	1548.9	1478.0	1440.3
12°	3010.2	3043.4	3028.3	2747.8	2099.3	1717.8	1518.7	1450.8	1417.6
13°	2916.7	2990.6	3022.3	2761.4	2087.3	1680.1	1481.0	1402.6	1360.3
14°	2832.3	2909.2	3005.7	2791.6	2066.1	1637.8	1446.3	1367.9	1331.7
15°	2737.3	2826.2	2978.6	2800.6	2042.0	1603.1	1410.1	1324.1	1291.0
16°	2604.6	2723.7	2928.8	2811.2	2013.4	1563.9	1376.9	1295.5	1251.8
17°	2494.5	2622.7	2891.1	2817.2	1998.3	1533.8	1348.3	1251.8	1223.1
18°	2393.4	2538.2	2823.2	2812.7	1974.2	1499.1	1306.0	1220.1	1192.9
19°	2313.5	2431.1	2755.4	2802.1	1941.0	1465.9	1274.4	1197.5	1165.8
20°	2197.4	2333.1	2680.0	2797.6	1910.8	1435.7	1244.2	1165.8	1138.6
21°	2100.8	2239.6	2610.6	2782.5	1889.7	1407.1	1221.6	1135.6	1111.5
22.5°	1974.2	2096.3	2494.5	2753.9	1842.9	1358.8	1171.8	1107.0	1073.8
23°	1959.1	2063.1	2464.3	2744.8	1829.4	1348.3	1155.2	1090.4	1063.2
24°	1864.1	1974.2	2393.4	2716.2	1794.7	1315.1	1128.1	1070.8	1039.1
25°	1811.3	1901.8	2305.9	2689.0	1778.1	1284.9	1110.0	1045.1	1018.0
26°	1737.4	1841.4	2227.5	2649.8	1741.9	1257.8	1081.3	1022.5	996.9
27°	1683.1	1770.6	2146.1	2621.1	1699.7	1229.1	1058.7	999.9	968.2
28°	1630.3	1714.8	2067.7	2574.4	1669.5	1197.5	1042.1	980.3	950.1
29°	1576.0	1649.9	2004.3	2538.2	1640.9	1170.3	1016.5	954.7	926.0
30°	1530.8	1598.6	1924.4	2489.9	1601.6	1138.6	993.9	936.6	910.9
32.5°	1426.7	1484.0	1761.5	2375.3	1508.1	1075.3	939.6	886.8	871.7
35°	1339.2	1376.9	1612.2	2247.1	1420.7	1007.4	895.8	844.6	837.0
37.5°	1247.2	1283.4	1476.5	2112.9	1328.7	945.6	846.1	812.9	806.9
40°	1146.2	1194.4	1360.3	1980.2	1236.7	885.3	802.3	776.7	778.2
42.5°	1045.1	1100.9	1247.2	1824.8	1150.7	828.0	760.1	742.0	745.0
45°	932.0	1002.9	1146.2	1683.1	1055.7	773.7	717.9	708.8	708.8
47.5°	814.4	904.9	1058.7	1536.8	965.2	719.4	677.2	671.1	674.1
50°	713.3	794.8	960.7	1395.0	879.2	669.6	634.9	633.4	636.4
52.5°	613.8	695.3	874.7	1262.3	791.8	624.4	594.2	594.2	597.2
55°	535.4	598.7	788.8	1123.6	708.8	571.6	547.5	552.0	558.0
57.5°	481.1	523.3	704.3	990.8	631.9	520.3	505.2	508.2	515.8
60°	420.8	453.9	621.4	868.7	561.0	470.5	463.0	469.0	476.6
62.5°	366.5	395.1	542.9	758.6	484.1	422.3	419.3	428.3	435.9
65°	322.7	342.3	461.5	647.0	422.3	374.0	372.5	386.1	395.1



TEST NUMBER: P735854

CATALOG NUMBER: S122DR-S1005D835-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	277.5	292.6	390.6	541.4	360.4	325.8	325.8	340.8	348.4
70°	235.3	247.3	322.7	446.4	307.7	277.5	279.0	297.1	303.1
72.5°	191.5	202.1	262.4	358.9	248.8	232.3	236.8	251.9	257.9
75°	155.3	162.9	206.6	283.5	199.1	185.5	191.5	205.1	209.6
77.5°	119.1	125.2	152.3	208.1	152.3	144.8	150.8	162.9	162.9
80°	87.5	89.0	108.6	146.3	108.6	104.1	111.6	117.6	117.6
82.5°	57.3	60.3	70.9	93.5	72.4	70.9	73.9	78.4	78.4
85°	33.2	34.7	39.2	51.3	40.7	40.7	43.7	43.7	42.2
87.5°	13.6	15.1	16.6	19.6	18.1	19.6	19.6	16.6	18.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)