

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 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: S122DRP-S1005D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122DRP-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

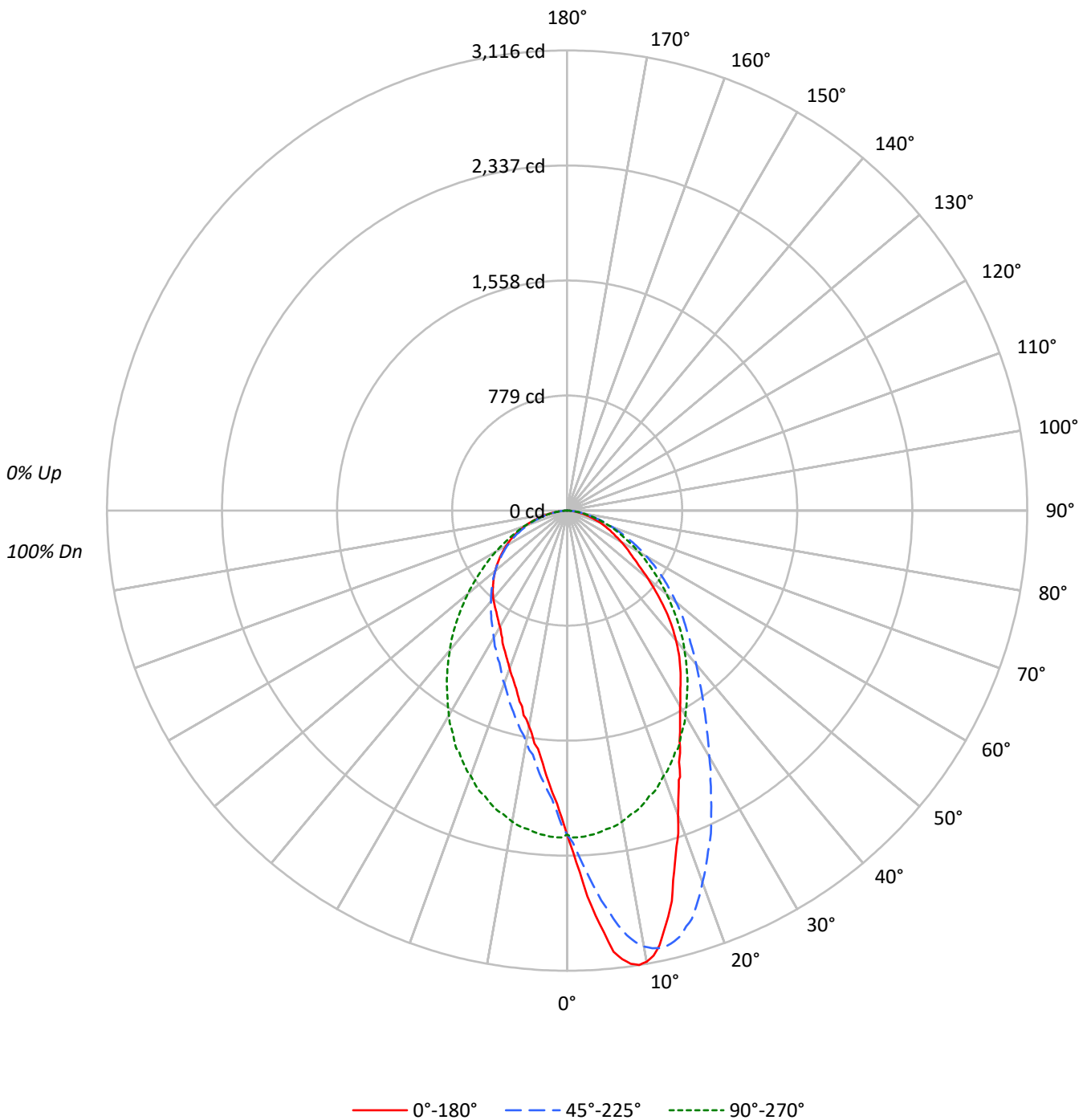
Lumens per Lamp: N/A
Luminaire Lumens: 4464.7 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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

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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

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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	



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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



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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



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	22.22	23.74	22.58	24.06	24.37	21.80	23.32	22.16	23.63	23.95
	3H	23.42	24.79	23.80	25.12	25.48	23.31	24.67	23.69	25.00	25.36
	4H	23.82	25.10	24.22	25.45	25.83	23.84	25.12	24.24	25.47	25.84
	6H	24.07	25.26	24.48	25.62	26.01	24.19	25.37	24.60	25.74	26.13
	8H	24.13	25.26	24.56	25.65	26.05	24.28	25.41	24.71	25.80	26.20
	12H	24.16	25.24	24.59	25.63	26.06	24.34	25.42	24.77	25.80	26.23
4H	2H	23.28	24.56	23.68	24.91	25.29	22.87	24.15	23.27	24.50	24.87
	3H	24.64	25.70	25.05	26.10	26.50	24.49	25.56	24.90	25.96	26.36
	4H	25.10	26.06	25.53	26.47	26.91	25.07	26.03	25.51	26.45	26.89
	6H	25.41	26.25	25.87	26.69	27.15	25.49	26.33	25.95	26.77	27.23
	8H	25.49	26.27	25.95	26.71	27.18	25.61	26.39	26.07	26.83	27.30
	12H	25.54	26.24	26.02	26.71	27.18	25.69	26.38	26.17	26.86	27.33
8H	4H	25.46	26.24	25.92	26.68	27.15	25.41	26.19	25.88	26.64	27.10
	6H	25.86	26.50	26.35	26.99	27.47	25.93	26.58	26.43	27.07	27.55
	8H	25.98	26.56	26.49	27.07	27.55	26.10	26.68	26.61	27.19	27.68
	12H	26.07	26.58	26.58	27.07	27.63	26.22	26.73	26.73	27.23	27.79
12H	4H	25.48	26.17	25.96	26.65	27.12	25.43	26.13	25.91	26.61	27.08
	6H	25.90	26.48	26.42	26.99	27.48	25.97	26.55	26.49	27.06	27.55
	8H	26.07	26.58	26.58	27.07	27.64	26.19	26.70	26.70	27.19	27.76