

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: P735856

Luminaire Tested: S122DR-S1005D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735856
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-S1005D850-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4951.4 lumens
Efficiency: N/A
Efficacy: 118.5 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

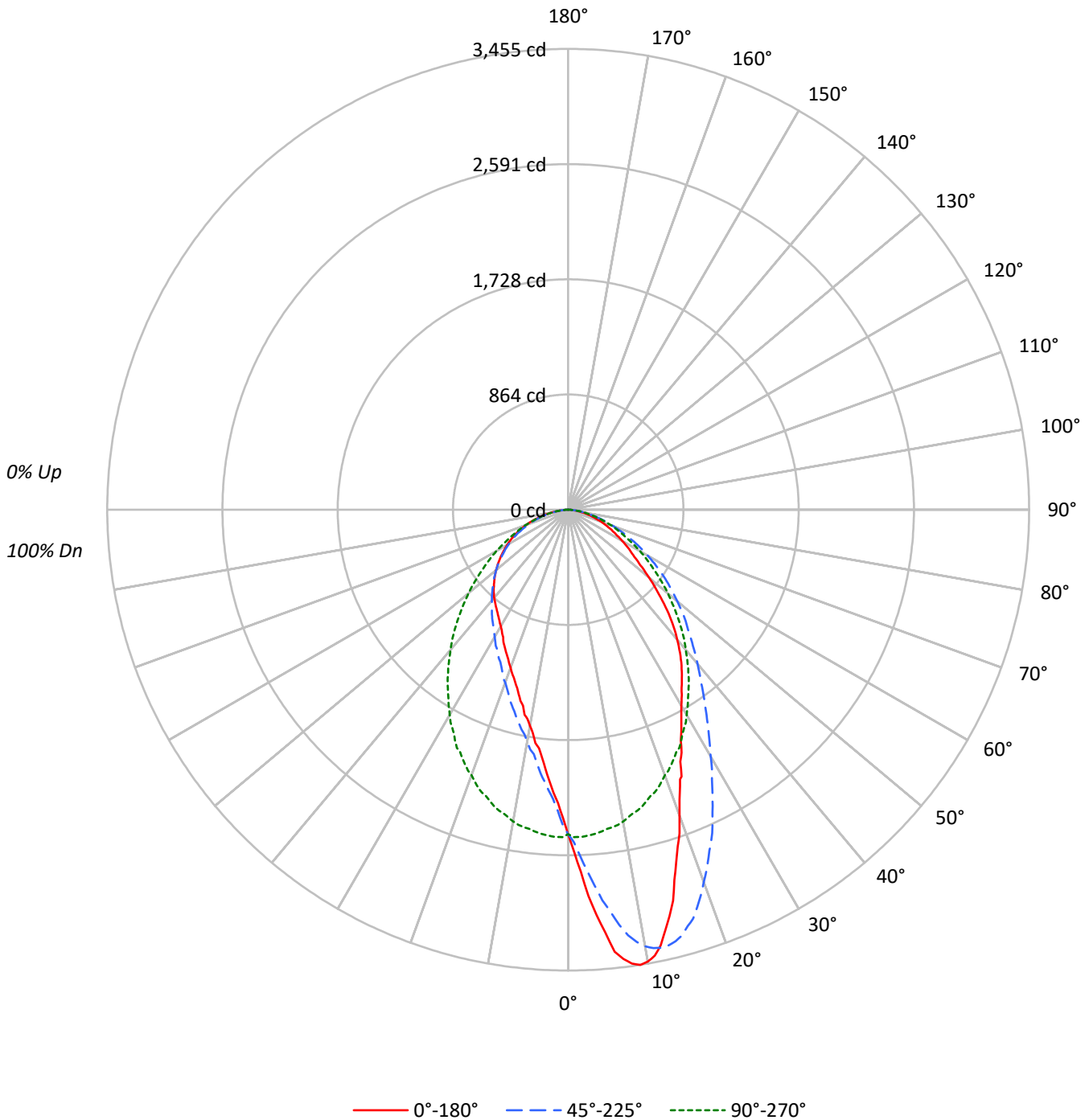
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	46775	46775	46775	46775	46775
5°	61347	56699	47019	39435	37629
10°	67149	64897	46322	34472	32122
15°	60406	65731	45064	31119	28490
20°	49846	60794	43346	28224	25830
25°	42601	54236	41821	26107	23944
30°	37678	47366	39422	24463	22421
35°	34850	41953	36969	23312	21782
40°	31894	37853	34413	22327	21654
45°	28096	34552	31826	21640	21369
50°	23656	31859	29158	21055	21106
55°	19896	29312	26343	20345	20737
60°	17937	26491	23919	19740	20317
65°	16278	23277	21299	18788	19930
70°	14662	20114	19175	17388	18894
75°	12796	17014	16398	15774	17267
80°	10737	13327	13327	13704	14445
85°	8116	9593	9968	10696	10321

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 50737 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.5	4.8
10°-20°	657.3	13.3
20°-30°	862.0	17.4
30°-40°	911.0	18.4
40°-50°	845.9	17.1
50°-60°	677.0	13.7
60°-70°	463.0	9.4
70°-80°	238.9	4.8
80°-90°	56.8	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°	1758.8	35.5
0°-40°	2669.8	53.9
0°-60°	4192.7	84.7
0°-90°	4951.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4951.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2434	2434	2434	2434	2434	
5°	3180	2939	2437	2044	1950	313
15°	3036	3303	2265	1564	1432	833
25°	2009	2557	1972	1231	1129	926
35°	1485	1788	1576	994	928	927
45°	1034	1271	1171	796	786	794
55°	594	875	786	607	619	544
65°	358	512	468	413	438	355
75°	172	229	221	212	232	183
85°	37	44	45	48	47	45
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°	2433.5	2433.5	2433.5	2433.5	2433.5	2433.5	2433.5	2433.5	2433.5
1°	2567.3	2553.9	2495.4	2498.8	2455.3	2406.8	2361.6	2333.2	2309.8
2°	2717.9	2691.1	2599.1	2553.9	2455.3	2351.6	2257.9	2232.8	2201.0
3°	2900.2	2836.6	2709.5	2602.4	2451.9	2301.4	2172.6	2127.5	2122.4
4°	3047.3	2990.5	2821.5	2652.6	2443.6	2252.9	2107.4	2058.9	2035.5
5°	3179.5	3142.7	2938.6	2716.2	2436.9	2206.1	2043.8	1976.9	1950.2
6°	3331.7	3256.4	3032.3	2779.7	2425.2	2160.9	1987.0	1906.7	1869.9
7°	3393.6	3346.7	3137.7	2821.5	2410.1	2109.1	1915.0	1828.1	1801.3
8°	3437.0	3418.6	3221.3	2890.1	2403.4	2060.5	1851.5	1798.0	1766.2
9°	3455.4	3440.4	3281.5	2918.6	2391.7	2035.5	1819.7	1731.1	1695.9
10°	3440.4	3447.1	3325.0	2962.0	2373.3	1983.6	1766.2	1689.2	1645.8
11°	3405.3	3422.0	3348.4	3012.2	2349.9	1941.8	1717.7	1639.1	1597.3
12°	3338.4	3375.2	3358.4	3047.3	2328.2	1905.0	1684.2	1609.0	1572.2
13°	3234.7	3316.6	3351.7	3062.4	2314.8	1863.2	1642.4	1555.4	1508.6
14°	3141.0	3226.3	3333.3	3095.8	2291.4	1816.4	1604.0	1517.0	1476.8
15°	3035.6	3134.3	3303.2	3105.9	2264.6	1777.9	1563.8	1468.5	1431.7
16°	2888.4	3020.6	3248.0	3117.6	2232.8	1734.4	1527.0	1436.7	1388.2
17°	2766.4	2908.5	3206.2	3124.3	2216.1	1701.0	1495.2	1388.2	1356.4
18°	2654.3	2814.9	3131.0	3119.3	2189.3	1662.5	1448.4	1353.1	1323.0
19°	2565.7	2696.1	3055.7	3107.5	2152.5	1625.7	1413.3	1328.0	1292.9
20°	2436.9	2587.4	2972.1	3102.5	2119.1	1592.2	1379.8	1292.9	1262.8
21°	2329.8	2483.7	2895.1	3085.8	2095.7	1560.5	1354.7	1259.4	1232.7
22.5°	2189.3	2324.8	2766.4	3054.0	2043.8	1506.9	1299.6	1227.6	1190.8
23°	2172.6	2288.0	2732.9	3044.0	2028.8	1495.2	1281.2	1209.2	1179.1
24°	2067.2	2189.3	2654.3	3012.2	1990.3	1458.4	1251.0	1187.5	1152.4
25°	2008.7	2109.1	2557.3	2982.1	1971.9	1425.0	1231.0	1159.1	1129.0
26°	1926.7	2042.2	2470.3	2938.6	1931.8	1394.9	1199.2	1134.0	1105.5
27°	1866.5	1963.5	2380.0	2906.8	1884.9	1363.1	1174.1	1108.9	1073.8
28°	1808.0	1901.7	2293.0	2855.0	1851.5	1328.0	1155.7	1087.1	1053.7
29°	1747.8	1829.7	2222.8	2814.9	1819.7	1297.9	1127.3	1058.7	1026.9
30°	1697.6	1772.9	2134.1	2761.3	1776.2	1262.8	1102.2	1038.6	1010.2
32.5°	1582.2	1645.8	1953.5	2634.2	1672.5	1192.5	1042.0	983.4	966.7
35°	1485.2	1527.0	1787.9	2492.1	1575.5	1117.2	993.5	936.6	928.3
37.5°	1383.2	1423.3	1637.4	2343.2	1473.5	1048.7	938.3	901.5	894.8
40°	1271.1	1324.6	1508.6	2196.0	1371.5	981.8	889.8	861.3	863.0
42.5°	1159.1	1220.9	1383.2	2023.8	1276.1	918.2	843.0	822.9	826.2
45°	1033.6	1112.2	1271.1	1866.5	1170.8	858.0	796.1	786.1	786.1
47.5°	903.2	1003.5	1174.1	1704.3	1070.4	797.8	751.0	744.3	747.6
50°	791.1	881.4	1065.4	1547.1	975.1	742.6	704.1	702.5	705.8
52.5°	680.7	771.0	970.1	1399.9	878.1	692.4	659.0	659.0	662.3
55°	593.7	664.0	874.7	1246.0	786.1	633.9	607.1	612.1	618.8
57.5°	533.5	580.4	781.1	1098.8	700.8	577.0	560.3	563.6	572.0
60°	466.6	503.4	689.1	963.4	622.2	521.8	513.5	520.2	528.5
62.5°	406.4	438.2	602.1	841.3	536.9	468.3	465.0	475.0	483.4
65°	357.9	379.7	511.8	717.5	468.3	414.8	413.1	428.2	438.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	307.7	324.5	433.2	600.4	399.7	361.3	361.3	378.0	386.4
70°	260.9	274.3	357.9	495.1	341.2	307.7	309.4	329.5	336.2
72.5°	212.4	224.1	291.0	398.1	276.0	257.6	262.6	279.3	286.0
75°	172.3	180.6	229.1	314.4	220.8	205.7	212.4	227.5	232.5
77.5°	132.1	138.8	168.9	230.8	168.9	160.6	167.3	180.6	180.6
80°	97.0	98.7	120.4	162.2	120.4	115.4	123.8	130.5	130.5
82.5°	63.6	66.9	78.6	103.7	80.3	78.6	82.0	87.0	87.0
85°	36.8	38.5	43.5	56.9	45.2	45.2	48.5	48.5	46.8
87.5°	15.1	16.7	18.4	21.7	20.1	21.7	21.7	18.4	20.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)