

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: P735855

Luminaire Tested: S122DR-S1005D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735855
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-S1005D840-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4508.7 lumens
Efficiency: N/A
Efficacy: 107.9 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

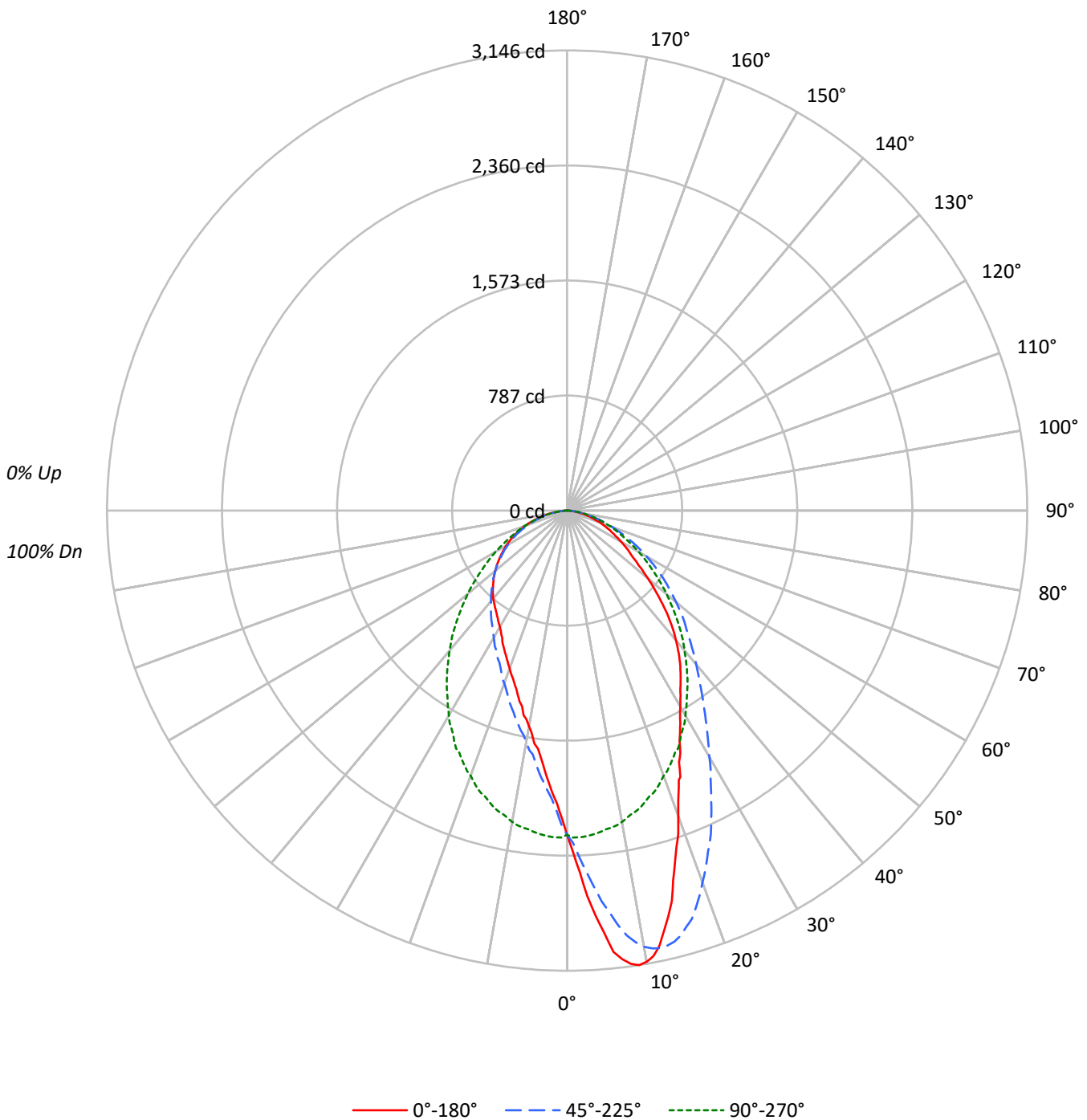
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	42594	42594	42594	42594	42594
5°	55864	51631	42815	35909	34264
10°	61145	59096	42182	31390	29249
15°	55008	59857	41036	28337	25943
20°	45389	55359	39472	25702	23521
25°	38792	49388	38082	23772	21802
30°	34311	43133	35898	22277	20417
35°	31734	38203	33665	21229	19835
40°	29044	34471	31337	20329	19719
45°	25585	31464	28980	19708	19458
50°	21542	29012	26551	19174	19219
55°	18120	26692	23987	18528	18884
60°	16334	24123	21782	17976	18502
65°	14822	21194	19393	17110	18147
70°	13353	18315	17461	15837	17203
75°	11652	15499	14927	14363	15722
80°	9774	12143	12143	12475	13150
85°	7388	8733	9064	9748	9395

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 46203 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.1	4.8
10°-20°	598.5	13.3
20°-30°	784.9	17.4
30°-40°	829.6	18.4
40°-50°	770.3	17.1
50°-60°	616.5	13.7
60°-70°	421.6	9.4
70°-80°	217.6	4.8
80°-90°	51.7	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°	1601.5	35.5
0°-40°	2431.1	53.9
0°-60°	3817.9	84.7
0°-90°	4508.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4508.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2216	2216	2216	2216	2216	
5°	2895	2676	2219	1861	1776	285
15°	2764	3008	2062	1424	1304	759
25°	1829	2329	1796	1121	1028	843
35°	1352	1628	1435	905	845	844
45°	941	1158	1066	725	716	723
55°	541	796	716	553	564	495
65°	326	466	426	376	399	323
75°	157	209	201	193	212	167
85°	34	40	41	44	43	41
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°	2216.0	2216.0	2216.0	2216.0	2216.0	2216.0	2216.0	2216.0	2216.0
1°	2337.8	2325.6	2272.3	2275.4	2235.8	2191.6	2150.5	2124.6	2103.3
2°	2474.9	2450.5	2366.8	2325.6	2235.8	2141.4	2056.1	2033.2	2004.3
3°	2640.9	2583.0	2467.3	2369.8	2232.7	2095.7	1978.4	1937.3	1932.7
4°	2774.9	2723.2	2569.3	2415.5	2225.1	2051.5	1919.0	1874.8	1853.5
5°	2895.3	2861.7	2675.9	2473.4	2219.0	2008.9	1861.1	1800.2	1775.8
6°	3033.8	2965.3	2761.2	2531.3	2208.4	1967.7	1809.3	1736.2	1702.7
7°	3090.2	3047.6	2857.2	2569.3	2194.7	1920.5	1743.9	1664.7	1640.3
8°	3129.8	3113.0	2933.3	2631.8	2188.6	1876.4	1686.0	1637.2	1608.3
9°	3146.5	3132.8	2988.2	2657.7	2177.9	1853.5	1657.0	1576.3	1544.3
10°	3132.8	3138.9	3027.8	2697.3	2161.2	1806.3	1608.3	1538.2	1498.6
11°	3100.9	3116.1	3049.1	2743.0	2139.8	1768.2	1564.1	1492.6	1454.5
12°	3039.9	3073.4	3058.2	2774.9	2120.0	1734.7	1533.7	1465.1	1431.6
13°	2945.5	3020.1	3052.1	2788.6	2107.9	1696.6	1495.6	1416.4	1373.8
14°	2860.2	2937.9	3035.4	2819.1	2086.5	1654.0	1460.6	1381.4	1344.8
15°	2764.3	2854.1	3008.0	2828.2	2062.2	1619.0	1424.0	1337.2	1303.7
16°	2630.2	2750.6	2957.7	2838.9	2033.2	1579.4	1390.5	1308.3	1264.1
17°	2519.1	2648.5	2919.6	2845.0	2018.0	1548.9	1361.6	1264.1	1235.2
18°	2417.0	2563.2	2851.1	2840.4	1993.6	1513.9	1318.9	1232.1	1204.7
19°	2336.3	2455.1	2782.5	2829.8	1960.1	1480.4	1286.9	1209.3	1177.3
20°	2219.0	2356.1	2706.4	2825.2	1929.7	1449.9	1256.5	1177.3	1149.9
21°	2121.6	2261.7	2636.3	2810.0	1908.3	1421.0	1233.6	1146.8	1122.5
22.5°	1993.6	2117.0	2519.1	2781.0	1861.1	1372.2	1183.4	1117.9	1084.4
23°	1978.4	2083.5	2488.6	2771.9	1847.4	1361.6	1166.6	1101.1	1073.7
24°	1882.4	1993.6	2417.0	2743.0	1812.4	1328.1	1139.2	1081.3	1049.4
25°	1829.1	1920.5	2328.7	2715.5	1795.6	1297.6	1120.9	1055.4	1028.0
26°	1754.5	1859.6	2249.5	2675.9	1759.1	1270.2	1092.0	1032.6	1006.7
27°	1699.7	1788.0	2167.3	2647.0	1716.4	1241.3	1069.2	1009.8	977.8
28°	1646.4	1731.7	2088.1	2599.8	1686.0	1209.3	1052.4	990.0	959.5
29°	1591.6	1666.2	2024.1	2563.2	1657.0	1181.9	1026.5	964.1	935.1
30°	1545.9	1614.4	1943.4	2514.5	1617.4	1149.9	1003.7	945.8	919.9
32.5°	1440.8	1498.6	1778.9	2398.7	1523.0	1085.9	948.8	895.5	880.3
35°	1352.4	1390.5	1628.1	2269.3	1434.7	1017.4	904.7	852.9	845.3
37.5°	1259.5	1296.1	1491.0	2133.7	1341.8	954.9	854.4	820.9	814.8
40°	1157.5	1206.2	1373.8	1999.7	1248.9	894.0	810.2	784.4	785.9
42.5°	1055.4	1111.8	1259.5	1842.8	1162.1	836.1	767.6	749.3	752.4
45°	941.2	1012.8	1157.5	1699.7	1066.1	781.3	725.0	715.8	715.8
47.5°	822.4	913.8	1069.2	1552.0	974.7	726.5	683.8	677.7	680.8
50°	720.4	802.6	970.2	1408.8	887.9	676.2	641.2	639.7	642.7
52.5°	619.9	702.1	883.3	1274.8	799.6	630.5	600.1	600.1	603.1
55°	540.7	604.6	796.5	1134.6	715.8	577.2	552.9	557.4	563.5
57.5°	485.8	528.5	711.2	1000.6	638.1	525.4	510.2	513.3	520.9
60°	424.9	458.4	627.5	877.3	566.6	475.2	467.6	473.7	481.3
62.5°	370.1	399.0	548.3	766.1	488.9	426.4	423.4	432.5	440.2
65°	325.9	345.7	466.0	653.4	426.4	377.7	376.2	389.9	399.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	280.2	295.5	394.5	546.8	364.0	329.0	329.0	344.2	351.8
70°	237.6	249.8	325.9	450.8	310.7	280.2	281.8	300.0	306.1
72.5°	193.4	204.1	265.0	362.5	251.3	234.5	239.1	254.3	260.4
75°	156.9	164.5	208.7	286.3	201.0	187.3	193.4	207.1	211.7
77.5°	120.3	126.4	153.8	210.2	153.8	146.2	152.3	164.5	164.5
80°	88.3	89.9	109.7	147.7	109.7	105.1	112.7	118.8	118.8
82.5°	57.9	60.9	71.6	94.4	73.1	71.6	74.6	79.2	79.2
85°	33.5	35.0	39.6	51.8	41.1	41.1	44.2	44.2	42.6
87.5°	13.7	15.2	16.8	19.8	18.3	19.8	19.8	16.8	18.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)