

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: P735900

Luminaire Tested: S122RDR-S1005D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735900
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-S1005D840-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4339.8 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

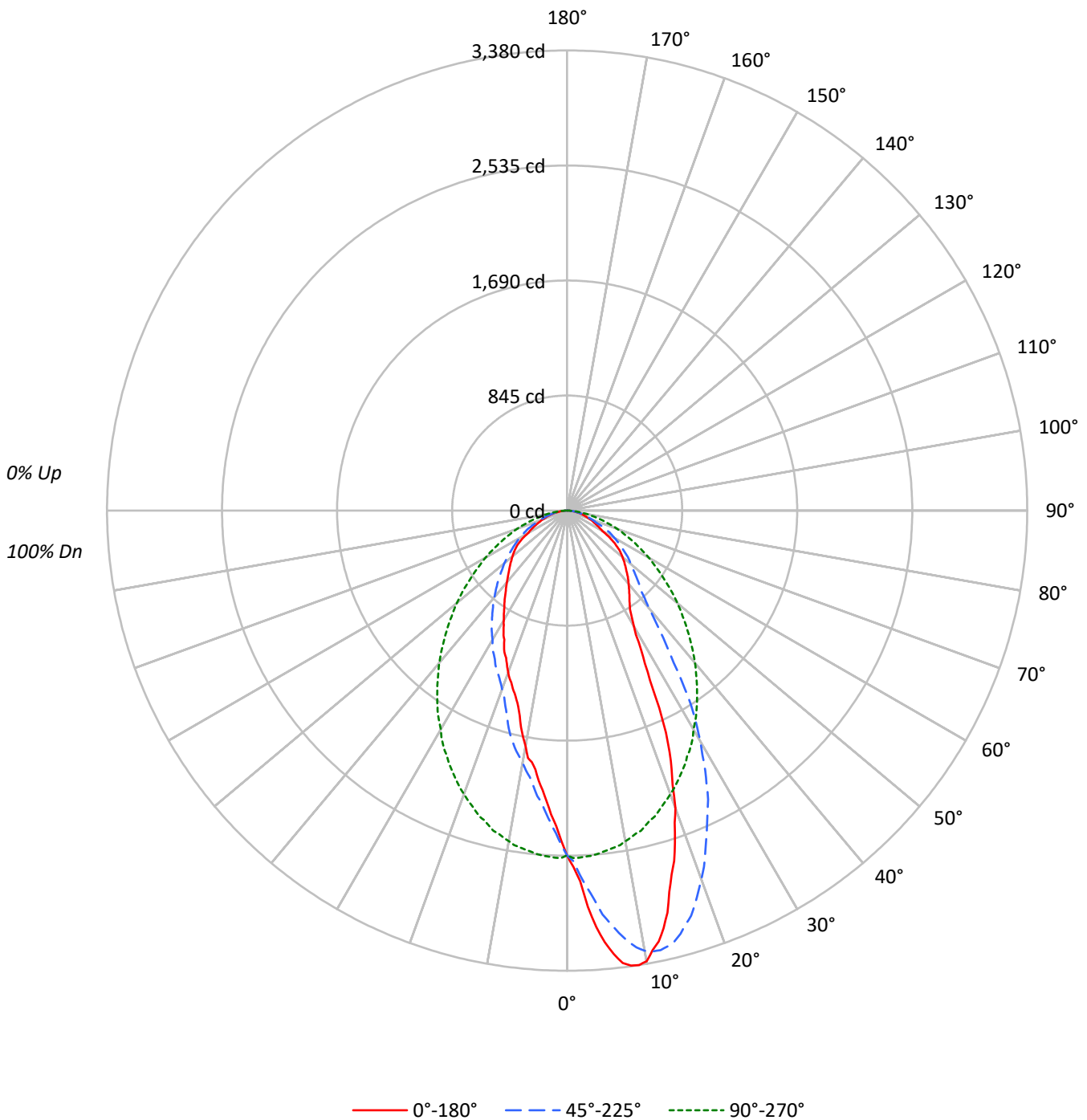
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89				87	
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77				75	
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68				66	
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60				58	
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54				52	
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48				46	
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44				42	
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40				38	
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37				35	
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34				32	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	48684	48684	48684	48684	48684
5°	61417	57450	48870	41522	39759
10°	65605	64059	48127	36742	34334
15°	57704	64038	46855	32943	28609
20°	47570	58943	45359	28598	25888
25°	33916	51746	43541	26487	23289
30°	21702	43404	41207	24303	20688
35°	18690	31985	39062	22550	18762
40°	17617	23388	36649	20866	17235
45°	16644	20037	34071	19333	16269
50°	15849	18262	31652	17990	15666
55°	14547	16893	28940	16538	15107
60°	11475	15400	26583	15515	12763
65°	10393	13785	24105	14409	11639
70°	9588	11127	21912	12409	10700
75°	8934	10063	19116	11088	10063
80°	8258	9099	16183	9951	9099
85°	7388	8072	12438	8733	8072

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 47693 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.6	5.7
10°-20°	660.0	15.2
20°-30°	827.9	19.1
30°-40°	788.9	18.2
40°-50°	695.9	16.0
50°-60°	547.4	12.6
60°-70°	349.3	8.0
70°-80°	177.6	4.1
80°-90°	47.1	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°	1733.6	39.9
0°-40°	2522.5	58.1
0°-60°	3765.8	86.8
0°-90°	4339.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4339.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2533	2533	2533	2533	2533	
5°	3183	2978	2533	2152	2061	309
15°	2900	3218	2355	1656	1438	803
25°	1599	2440	2053	1249	1098	721
35°	796	1363	1665	961	800	506
45°	612	737	1253	711	598	475
55°	434	504	864	494	451	381
65°	228	303	530	317	256	229
75°	120	136	257	149	136	128
85°	34	37	56	40	37	38
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°	2532.8	2532.8	2532.8	2532.8	2532.8	2532.8	2532.8	2532.8	2532.8
1°	2618.1	2630.3	2573.9	2580.0	2552.6	2503.8	2456.6	2461.2	2427.7
2°	2723.2	2755.1	2677.5	2630.3	2551.1	2465.8	2371.3	2359.2	2318.0
3°	2913.5	2898.3	2770.4	2674.4	2545.0	2417.0	2298.2	2270.8	2235.8
4°	3067.4	3021.7	2864.8	2730.8	2541.9	2360.7	2226.7	2179.4	2144.4
5°	3183.1	3125.2	2977.5	2773.4	2532.8	2328.7	2152.0	2098.7	2060.6
6°	3276.0	3231.8	3050.6	2813.0	2520.6	2281.5	2107.9	2036.3	1996.7
7°	3347.6	3311.0	3125.2	2866.3	2509.9	2234.3	2037.8	1963.2	1916.0
8°	3375.0	3358.3	3193.8	2904.4	2497.7	2200.8	1975.4	1908.3	1865.7
9°	3379.6	3381.1	3248.6	2940.9	2487.1	2139.8	1931.2	1862.7	1839.8
10°	3361.3	3375.0	3282.1	2982.1	2465.8	2109.4	1882.5	1817.0	1759.1
11°	3289.7	3350.6	3298.9	3009.5	2447.5	2060.6	1839.8	1754.5	1696.6
12°	3236.4	3294.3	3300.4	3044.5	2426.2	2037.8	1803.3	1689.0	1628.1
13°	3148.1	3209.0	3285.1	3053.7	2414.0	1981.4	1757.6	1622.0	1547.4
14°	3043.0	3140.5	3260.8	3073.5	2383.5	1932.7	1711.9	1527.6	1483.4
15°	2899.8	3038.4	3218.1	3081.1	2354.6	1899.2	1655.5	1480.4	1437.7
16°	2781.0	2937.9	3160.3	3081.1	2336.3	1853.5	1594.6	1439.3	1396.6
17°	2691.2	2819.1	3113.0	3082.6	2305.8	1821.5	1533.7	1401.2	1367.7
18°	2564.8	2707.9	3038.4	3076.5	2273.9	1783.5	1481.9	1369.2	1328.1
19°	2424.6	2595.2	2959.2	3065.8	2246.5	1743.9	1427.1	1335.7	1300.7
20°	2325.6	2482.5	2881.6	3049.1	2217.5	1718.0	1398.1	1297.6	1265.6
21°	2159.6	2351.5	2803.9	3026.2	2187.1	1673.8	1358.5	1264.1	1229.1
22.5°	1990.6	2167.3	2660.7	2988.2	2136.8	1619.0	1314.4	1223.0	1171.2
23°	1925.1	2123.1	2616.5	2977.5	2120.0	1605.3	1300.7	1204.7	1159.0
24°	1785.0	1990.6	2525.2	2944.0	2083.5	1559.6	1274.8	1168.2	1136.2
25°	1599.2	1877.9	2439.9	2909.0	2053.0	1526.1	1248.9	1139.2	1098.1
26°	1389.0	1724.1	2362.2	2866.3	2010.4	1480.4	1213.8	1111.8	1053.9
27°	1259.5	1591.6	2257.1	2820.6	1979.9	1446.9	1184.9	1070.7	1029.6
28°	1156.0	1382.9	2162.7	2776.5	1943.4	1405.7	1165.1	1041.7	993.0
29°	1043.3	1268.7	2051.5	2717.1	1903.8	1358.5	1133.1	1012.8	961.0
30°	977.8	1146.8	1955.6	2672.9	1856.6	1326.5	1095.0	983.9	932.1
32.5°	859.0	945.8	1695.1	2546.5	1766.7	1235.2	1032.6	904.7	860.5
35°	796.5	842.2	1363.1	2398.8	1664.7	1159.0	961.0	839.2	799.6
37.5°	749.3	776.7	1125.5	2240.4	1561.1	1092.0	895.5	778.3	740.2
40°	702.1	723.4	932.1	2088.1	1460.6	1026.5	831.6	715.8	686.9
42.5°	659.5	676.2	808.7	1937.3	1357.0	959.5	769.1	667.1	641.2
45°	612.3	627.5	737.1	1754.5	1253.4	891.0	711.2	613.8	598.5
47.5°	572.7	583.3	668.6	1591.6	1151.4	825.5	651.9	571.1	560.5
50°	530.0	543.7	610.7	1410.3	1058.5	761.5	601.6	533.1	523.9
52.5°	488.9	495.0	562.0	1229.1	961.0	699.1	548.3	495.0	488.9
55°	434.1	458.4	504.1	1043.3	863.6	641.2	493.5	455.4	450.8
57.5°	371.6	403.6	452.3	875.7	772.2	577.2	449.3	418.8	399.0
60°	298.5	336.6	400.6	728.0	691.5	519.3	403.6	356.4	332.0
62.5°	262.0	274.1	353.3	609.2	609.2	464.5	357.9	306.1	295.5
65°	228.5	237.6	303.1	504.1	530.0	403.6	316.8	265.0	255.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	199.5	207.1	231.5	420.4	456.9	351.8	262.0	231.5	220.8
70°	170.6	176.7	198.0	342.7	389.9	300.0	220.8	198.0	190.4
72.5°	144.7	150.8	163.0	257.4	319.8	249.8	185.8	169.1	163.0
75°	120.3	123.4	135.5	191.9	257.4	199.5	149.3	138.6	135.5
77.5°	97.5	99.0	106.6	137.1	199.5	152.3	120.3	111.2	109.7
80°	74.6	76.2	82.2	99.0	146.2	109.7	89.9	85.3	82.2
82.5°	53.3	54.8	57.9	67.0	99.0	74.6	64.0	62.4	57.9
85°	33.5	33.5	36.6	41.1	56.4	42.6	39.6	38.1	36.6
87.5°	15.2	15.2	16.8	16.8	25.9	18.3	18.3	16.8	15.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)