

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: P735900

Luminaire Tested: S122RDRP-S1005D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122RDRP-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

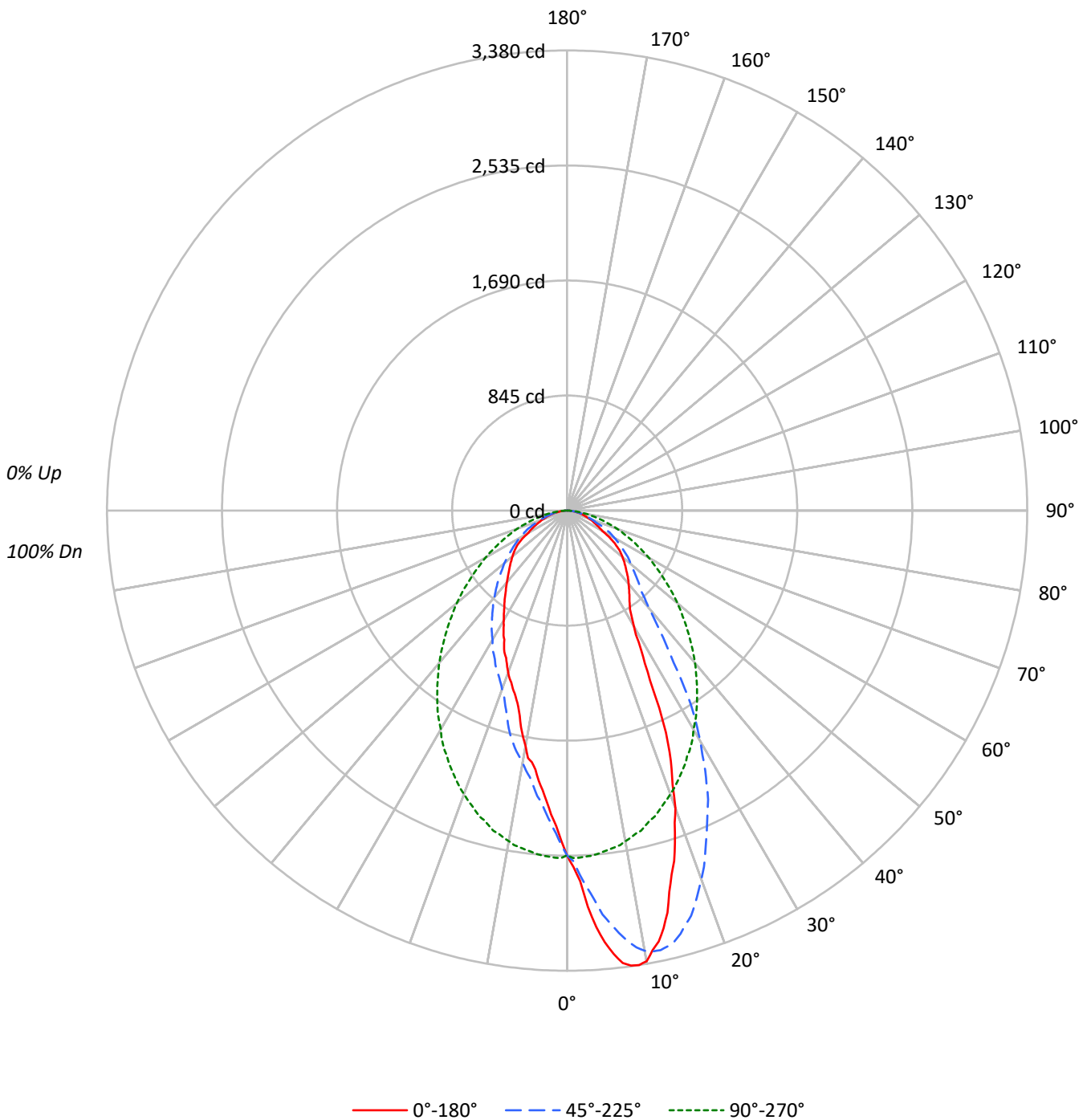
Lumens per Lamp: N/A
Luminaire Lumens: 4339.8 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P735900

CATALOG NUMBER: S122RDRP-S1005D840-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	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				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				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



TEST NUMBER: P735900

CATALOG NUMBER: S122RDRP-S1005D840-X4F0-XX-UDD-W-W

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	



TEST NUMBER: P735900

CATALOG NUMBER: S122RDRP-S1005D840-X4F0-XX-UDD-W-W

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



TEST NUMBER: P735900

CATALOG NUMBER: S122RDRP-S1005D840-X4F0-XX-UDD-W-W

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



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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	19.93	21.40	20.30	21.72	22.03	22.63	24.10	23.00	24.41	24.73
	3H	21.05	22.36	21.43	22.69	23.05	24.07	25.38	24.45	25.71	26.07
	4H	21.49	22.72	21.89	23.07	23.45	24.57	25.80	24.97	26.15	26.53
	6H	21.84	22.97	22.25	23.34	23.73	24.90	26.04	25.31	26.40	26.80
	8H	21.95	23.03	22.38	23.42	23.82	24.99	26.07	25.42	26.46	26.86
	12H	22.03	23.06	22.46	23.44	23.87	25.04	26.07	25.47	26.45	26.88
4H	2H	21.10	22.33	21.50	22.68	23.06	23.08	24.31	23.48	24.66	25.04
	3H	22.33	23.35	22.74	23.75	24.15	24.74	25.76	25.15	26.16	26.56
	4H	22.81	23.73	23.24	24.14	24.58	25.38	26.30	25.81	26.71	27.15
	6H	23.21	24.01	23.67	24.45	24.91	25.83	26.63	26.29	27.07	27.53
	8H	23.35	24.09	23.81	24.53	25.00	25.96	26.70	26.43	27.15	27.62
	12H	23.45	24.11	23.93	24.59	25.06	26.04	26.70	26.52	27.18	27.66
8H	4H	23.21	23.96	23.68	24.40	24.87	25.49	26.23	25.96	26.68	27.15
	6H	23.70	24.32	24.20	24.81	25.29	26.05	26.67	26.55	27.16	27.64
	8H	23.89	24.44	24.41	24.95	25.44	26.25	26.80	26.77	27.31	27.80
	12H	24.05	24.54	24.56	25.03	25.59	26.40	26.89	26.91	27.38	27.94
12H	4H	23.26	23.92	23.74	24.40	24.87	25.48	26.14	25.96	26.62	27.09
	6H	23.77	24.32	24.29	24.83	25.32	26.05	26.60	26.57	27.11	27.60
	8H	24.01	24.50	24.53	24.99	25.56	26.30	26.78	26.81	27.27	27.84