

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: P735936

Luminaire Tested: S122RDRP-S865D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735936
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-S865D840-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

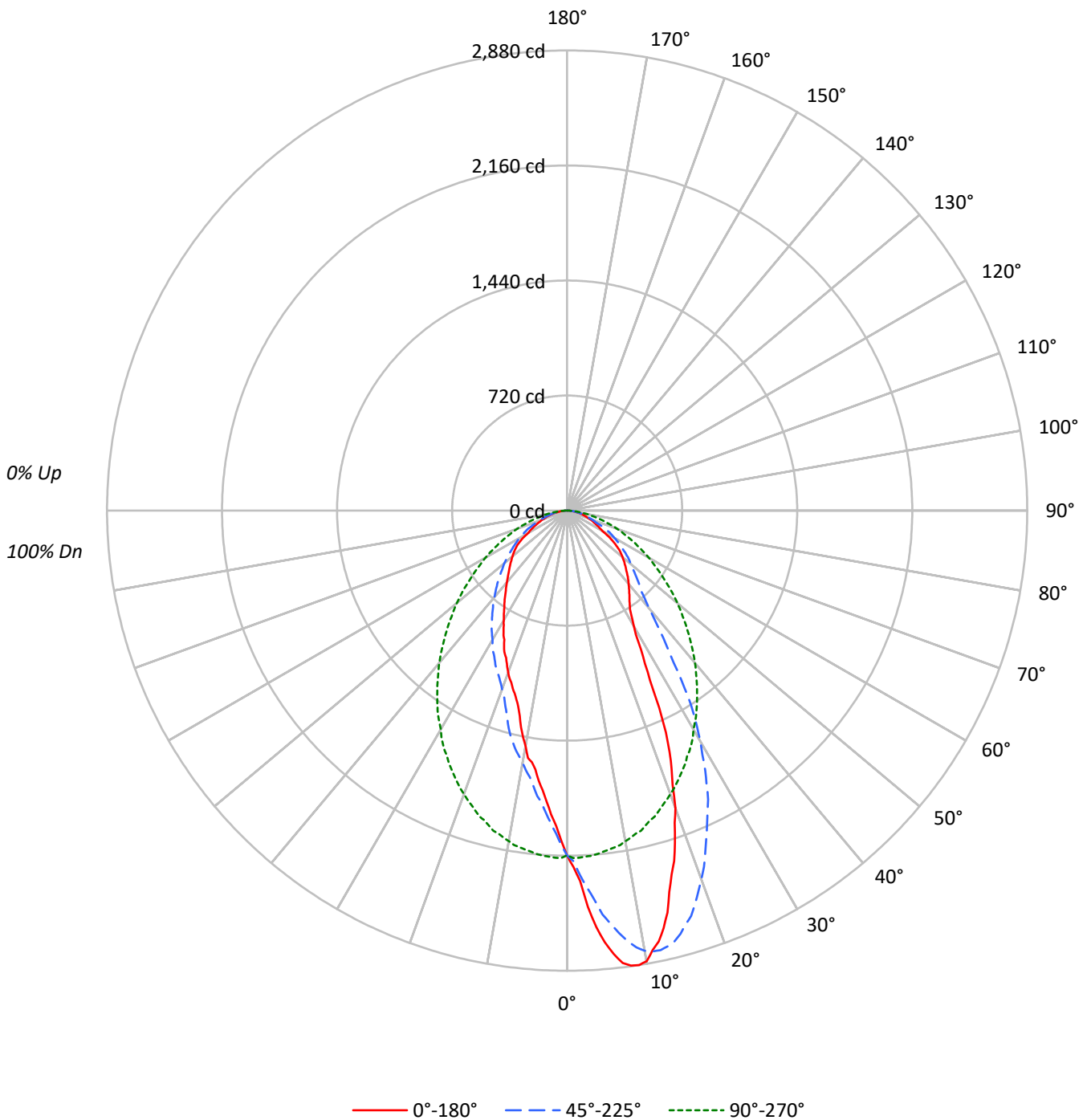
Lumens per Lamp: N/A
Luminaire Lumens: 3697.9 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 35
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: P735936

CATALOG NUMBER: S122RDRP-S865D840-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot





TEST NUMBER: P735936

CATALOG NUMBER: S122RDRP-S865D840-X4F0-XX-UDD-W-W

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	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°	41481	41481	41481	41481	41481
5°	52333	48953	41640	35381	33878
10°	55901	54583	41007	31307	29255
15°	49169	54566	39924	28070	24379
20°	40533	50223	38649	24368	22059
25°	28898	44092	37100	22568	19845
30°	18491	36983	35110	20710	17627
35°	15926	27254	33283	19215	15987
40°	15012	19928	31226	17780	14686
45°	14181	17074	29031	16473	13863
50°	13504	15562	26970	15328	13349
55°	12396	14396	24658	14091	12872
60°	9780	13120	22650	13220	10875
65°	8855	11743	20539	12275	9915
70°	8166	9481	18669	10577	9116
75°	7612	8578	16286	9447	8578
80°	7040	7759	13792	8479	7759
85°	6307	6859	10586	7432	6859

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 40639 cd/sqm



TEST NUMBER: P735936

CATALOG NUMBER: S122RDRP-S865D840-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.3	5.7
10°-20°	562.4	15.2
20°-30°	705.5	19.1
30°-40°	672.2	18.2
40°-50°	593.0	16.0
50°-60°	466.5	12.6
60°-70°	297.6	8.0
70°-80°	151.3	4.1
80°-90°	40.1	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°	1477.2	39.9
0°-40°	2149.3	58.1
0°-60°	3208.8	86.8
0°-90°	3697.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3697.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2158	2158	2158	2158	2158	
5°	2712	2537	2158	1834	1756	264
15°	2471	2742	2006	1411	1225	684
25°	1363	2079	1749	1064	936	614
35°	679	1162	1418	819	681	432
45°	522	628	1068	606	510	404
55°	370	430	736	420	384	325
65°	195	258	452	270	218	195
75°	102	116	219	127	116	109
85°	29	31	48	34	31	32
90°	0	0	0	0	0	



TEST NUMBER: P735936

CATALOG NUMBER: S122RDRP-S865D840-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2158.1	2158.1	2158.1	2158.1	2158.1	2158.1	2158.1	2158.1	2158.1
1°	2230.8	2241.2	2193.2	2198.4	2175.0	2133.5	2093.2	2097.1	2068.6
2°	2320.4	2347.6	2281.4	2241.2	2173.7	2101.0	2020.6	2010.2	1975.2
3°	2482.6	2469.6	2360.6	2278.8	2168.5	2059.5	1958.3	1934.9	1905.1
4°	2613.6	2574.7	2441.0	2326.8	2165.9	2011.5	1897.3	1857.1	1827.2
5°	2712.3	2663.0	2537.1	2363.2	2158.1	1984.2	1833.7	1788.3	1755.8
6°	2791.4	2753.8	2599.4	2396.9	2147.8	1944.0	1796.1	1735.1	1701.3
7°	2852.4	2821.3	2663.0	2442.3	2138.7	1903.8	1736.4	1672.8	1632.6
8°	2875.8	2861.5	2721.4	2474.8	2128.3	1875.2	1683.2	1626.1	1589.7
9°	2879.7	2881.0	2768.1	2505.9	2119.2	1823.3	1645.5	1587.1	1567.7
10°	2864.1	2875.8	2796.6	2541.0	2101.0	1797.4	1604.0	1548.2	1498.9
11°	2803.1	2855.0	2810.9	2564.3	2085.5	1755.8	1567.7	1495.0	1445.7
12°	2757.7	2807.0	2812.2	2594.2	2067.3	1736.4	1536.5	1439.2	1387.3
13°	2682.4	2734.3	2799.2	2602.0	2056.9	1688.4	1497.6	1382.1	1318.5
14°	2592.9	2675.9	2778.5	2618.8	2031.0	1646.8	1458.7	1301.6	1264.0
15°	2470.9	2589.0	2742.1	2625.3	2006.3	1618.3	1410.6	1261.4	1225.1
16°	2369.7	2503.3	2692.8	2625.3	1990.7	1579.3	1358.7	1226.4	1190.0
17°	2293.1	2402.1	2652.6	2626.6	1964.8	1552.1	1306.8	1193.9	1165.4
18°	2185.4	2307.4	2589.0	2621.4	1937.5	1519.6	1262.7	1166.7	1131.6
19°	2066.0	2211.3	2521.5	2612.3	1914.2	1485.9	1216.0	1138.1	1108.3
20°	1981.6	2115.3	2455.3	2598.1	1889.5	1463.8	1191.3	1105.7	1078.4
21°	1840.2	2003.7	2389.1	2578.6	1863.5	1426.2	1157.6	1077.1	1047.3
22.5°	1696.1	1846.7	2267.1	2546.2	1820.7	1379.5	1119.9	1042.1	998.0
23°	1640.3	1809.0	2229.5	2537.1	1806.4	1367.8	1108.3	1026.5	987.6
24°	1520.9	1696.1	2151.6	2508.5	1775.3	1328.9	1086.2	995.4	968.1
25°	1362.6	1600.1	2079.0	2478.7	1749.3	1300.3	1064.1	970.7	935.7
26°	1183.5	1469.0	2012.8	2442.3	1713.0	1261.4	1034.3	947.3	898.0
27°	1073.2	1356.1	1923.2	2403.4	1687.1	1232.8	1009.6	912.3	877.3
28°	985.0	1178.3	1842.8	2365.8	1655.9	1197.8	992.8	887.7	846.1
29°	888.9	1081.0	1748.0	2315.2	1622.2	1157.6	965.5	863.0	818.9
30°	833.1	977.2	1666.3	2277.5	1581.9	1130.3	933.1	838.3	794.2
32.5°	731.9	805.9	1444.4	2169.8	1505.4	1052.5	879.9	770.9	733.2
35°	678.7	717.6	1161.5	2043.9	1418.4	987.6	818.9	715.1	681.3
37.5°	638.5	661.8	959.0	1909.0	1330.2	930.5	763.1	663.1	630.7
40°	598.3	616.4	794.2	1779.2	1244.5	874.7	708.6	609.9	585.3
42.5°	561.9	576.2	689.1	1650.7	1156.3	817.6	655.4	568.4	546.3
45°	521.7	534.7	628.1	1495.0	1068.0	759.2	606.0	523.0	510.0
47.5°	487.9	497.0	569.7	1356.1	981.1	703.4	555.4	486.7	477.6
50°	451.6	463.3	520.4	1201.7	901.9	648.9	512.6	454.2	446.4
52.5°	416.6	421.8	478.9	1047.3	818.9	595.7	467.2	421.8	416.6
55°	369.9	390.6	429.6	888.9	735.8	546.3	420.5	388.0	384.1
57.5°	316.6	343.9	385.4	746.2	658.0	491.8	382.8	356.9	340.0
60°	254.4	286.8	341.3	620.3	589.2	442.5	343.9	303.7	282.9
62.5°	223.2	233.6	301.1	519.1	519.1	395.8	305.0	260.8	251.8
65°	194.7	202.4	258.2	429.6	451.6	343.9	269.9	225.8	218.0



TEST NUMBER: P735936

CATALOG NUMBER: S122RDRP-S865D840-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	170.0	176.5	197.3	358.2	389.3	299.8	223.2	197.3	188.2
70°	145.3	150.5	168.7	292.0	332.2	255.7	188.2	168.7	162.2
72.5°	123.3	128.5	138.9	219.3	272.5	212.8	158.3	144.0	138.9
75°	102.5	105.1	115.5	163.5	219.3	170.0	127.2	118.1	115.5
77.5°	83.1	84.4	90.8	116.8	170.0	129.8	102.5	94.7	93.4
80°	63.6	64.9	70.1	84.4	124.6	93.4	76.6	72.7	70.1
82.5°	45.4	46.7	49.3	57.1	84.4	63.6	54.5	53.2	49.3
85°	28.6	28.6	31.1	35.0	48.0	36.3	33.7	32.4	31.1
87.5°	13.0	13.0	14.3	14.3	22.1	15.6	15.6	14.3	13.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P735936
 CATALOG NUMBER: S122RDRP-S865D840-X4F0-XX-UDD-W-W

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	19.38	20.85	19.74	21.16	21.47	22.07	23.54	22.44	23.86	24.17
	3H	20.49	21.81	20.87	22.14	22.50	23.51	24.83	23.89	25.16	25.52
	4H	20.94	22.17	21.34	22.52	22.90	24.02	25.25	24.42	25.60	25.98
	6H	21.28	22.42	21.69	22.78	23.18	24.34	25.48	24.76	25.85	26.24
	8H	21.39	22.48	21.82	22.87	23.27	24.43	25.51	24.86	25.90	26.30
	12H	21.47	22.50	21.90	22.89	23.32	24.48	25.51	24.91	25.90	26.32
4H	2H	20.55	21.78	20.95	22.13	22.51	22.53	23.76	22.93	24.11	24.49
	3H	21.77	22.79	22.18	23.19	23.60	24.18	25.20	24.59	25.60	26.01
	4H	22.25	23.17	22.69	23.59	24.03	24.82	25.74	25.26	26.16	26.60
	6H	22.66	23.45	23.11	23.90	24.36	25.28	26.07	25.74	26.52	26.98
	8H	22.79	23.53	23.26	23.98	24.45	25.41	26.15	25.87	26.59	27.06
	12H	22.89	23.55	23.37	24.03	24.50	25.49	26.15	25.97	26.63	27.10
8H	4H	22.66	23.40	23.12	23.84	24.31	24.93	25.68	25.40	26.12	26.59
	6H	23.15	23.76	23.65	24.25	24.73	25.50	26.11	25.99	26.60	27.08
	8H	23.34	23.89	23.85	24.40	24.89	25.70	26.25	26.21	26.76	27.25
	12H	23.49	23.98	24.01	24.47	25.04	25.84	26.33	26.35	26.82	27.39
12H	4H	22.70	23.37	23.19	23.85	24.32	24.92	25.59	25.41	26.07	26.54
	6H	23.22	23.77	23.73	24.28	24.77	25.49	26.04	26.01	26.55	27.04
	8H	23.46	23.94	23.97	24.44	25.00	25.74	26.23	26.25	26.72	27.28