

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: P735935

Luminaire Tested: S122RDRP-S865D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735935
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-S865D835-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

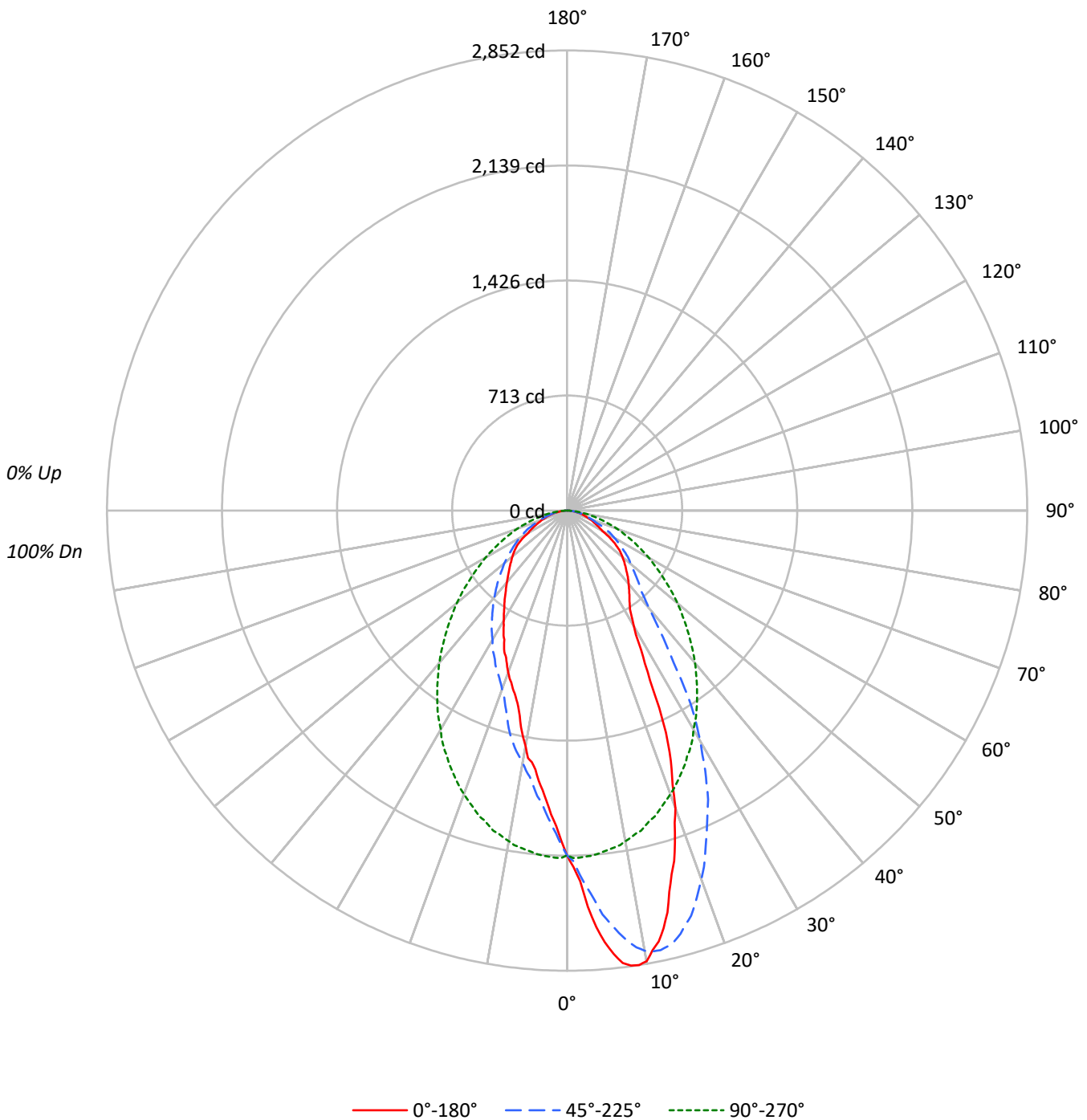
Lumens per Lamp: N/A
Luminaire Lumens: 3661.7 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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

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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	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°	41078	41078	41078	41078	41078
5°	51822	48474	41235	35035	33548
10°	55354	54051	40607	31000	28968
15°	48688	54033	39534	27797	24140
20°	40139	49732	38271	24131	21844
25°	28616	43662	36739	22347	19650
30°	18311	36621	34768	20508	17456
35°	15771	26987	32959	19028	15832
40°	14864	19735	30923	17604	14543
45°	14043	16908	28749	16313	13727
50°	13373	15409	26706	15179	13220
55°	12272	14256	24416	13954	12748
60°	9684	12994	22427	13090	10768
65°	8769	11630	20339	12157	9819
70°	8087	9391	18490	10470	9026
75°	7538	8496	16130	9350	8496
80°	6974	7682	13659	8390	7682
85°	6241	6793	10476	7366	6793

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 40242 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.3	5.7
10°-20°	556.9	15.2
20°-30°	698.6	19.1
30°-40°	665.6	18.2
40°-50°	587.2	16.0
50°-60°	461.9	12.6
60°-70°	294.7	8.0
70°-80°	149.8	4.1
80°-90°	39.7	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°	1462.7	39.9
0°-40°	2128.4	58.1
0°-60°	3177.5	86.8
0°-90°	3661.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3661.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2137	2137	2137	2137	2137	
5°	2686	2512	2137	1816	1739	261
15°	2447	2715	1987	1397	1213	678
25°	1349	2059	1732	1054	926	608
35°	672	1150	1405	811	675	427
45°	517	622	1058	600	505	400
55°	366	425	729	416	380	322
65°	193	256	447	267	216	193
75°	102	114	217	126	114	108
85°	28	31	48	33	31	32
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°	2137.1	2137.1	2137.1	2137.1	2137.1	2137.1	2137.1	2137.1	2137.1
1°	2209.0	2219.3	2171.7	2176.9	2153.8	2112.6	2072.8	2076.7	2048.4
2°	2297.7	2324.7	2259.1	2219.3	2152.5	2080.5	2000.8	1990.6	1955.9
3°	2458.3	2445.5	2337.5	2256.6	2147.3	2039.4	1939.2	1916.0	1886.5
4°	2588.1	2549.6	2417.2	2304.1	2144.8	1991.8	1878.8	1838.9	1809.4
5°	2685.8	2636.9	2512.3	2340.1	2137.1	1964.9	1815.8	1770.8	1738.7
6°	2764.2	2726.9	2574.0	2373.5	2126.8	1925.0	1778.5	1718.1	1684.7
7°	2824.6	2793.7	2636.9	2418.5	2117.8	1885.2	1719.4	1656.4	1616.6
8°	2847.7	2833.6	2694.8	2450.6	2107.5	1856.9	1666.7	1610.2	1574.2
9°	2851.5	2852.8	2741.0	2481.4	2098.5	1805.5	1629.5	1571.6	1552.3
10°	2836.1	2847.7	2769.3	2516.1	2080.5	1779.8	1588.3	1533.1	1484.2
11°	2775.7	2827.1	2783.4	2539.3	2065.1	1738.7	1552.3	1480.4	1431.6
12°	2730.7	2779.6	2784.7	2568.8	2047.1	1719.4	1521.5	1425.1	1373.7
13°	2656.2	2707.6	2771.9	2576.5	2036.8	1671.9	1483.0	1368.6	1305.6
14°	2567.5	2649.8	2751.3	2593.2	2011.1	1630.7	1444.4	1288.9	1251.6
15°	2446.7	2563.7	2715.3	2599.7	1986.7	1602.5	1396.9	1249.1	1213.1
16°	2346.5	2478.9	2666.5	2599.7	1971.3	1563.9	1345.5	1214.4	1178.4
17°	2270.7	2378.6	2626.7	2601.0	1945.6	1536.9	1294.1	1182.3	1154.0
18°	2164.0	2284.8	2563.7	2595.8	1918.6	1504.8	1250.4	1155.3	1120.6
19°	2045.8	2189.7	2496.9	2586.8	1895.5	1471.4	1204.1	1127.0	1097.4
20°	1962.3	2094.6	2431.3	2572.7	1871.0	1449.5	1179.7	1094.9	1067.9
21°	1822.2	1984.1	2365.8	2553.4	1845.3	1412.3	1146.3	1066.6	1037.0
22.5°	1679.6	1828.6	2245.0	2521.3	1802.9	1366.0	1109.0	1031.9	988.2
23°	1624.3	1791.4	2207.7	2512.3	1788.8	1354.5	1097.4	1016.5	977.9
24°	1506.1	1679.6	2130.6	2484.0	1758.0	1315.9	1075.6	985.6	958.7
25°	1349.3	1584.5	2058.7	2454.5	1732.3	1287.6	1053.7	961.2	926.5
26°	1172.0	1454.7	1993.1	2418.5	1696.3	1249.1	1024.2	938.1	889.3
27°	1062.7	1342.9	1904.5	2379.9	1670.6	1220.8	999.8	903.4	868.7
28°	975.4	1166.8	1824.8	2342.7	1639.7	1186.1	983.1	879.0	837.9
29°	880.3	1070.5	1731.0	2292.5	1606.3	1146.3	956.1	854.6	810.9
30°	825.0	967.6	1650.0	2255.3	1566.5	1119.3	924.0	830.1	786.5
32.5°	724.8	798.0	1430.3	2148.6	1490.7	1042.2	871.3	763.3	726.1
35°	672.1	710.6	1150.1	2024.0	1404.6	977.9	810.9	708.1	674.7
37.5°	632.2	655.4	949.7	1890.3	1317.2	921.4	755.6	656.7	624.5
40°	592.4	610.4	786.5	1761.8	1232.4	866.1	701.6	604.0	579.6
42.5°	556.4	570.6	682.4	1634.6	1145.0	809.6	649.0	562.9	541.0
45°	516.6	529.4	622.0	1480.4	1057.6	751.8	600.1	517.9	505.0
47.5°	483.2	492.2	564.1	1342.9	971.5	696.5	550.0	481.9	472.9
50°	447.2	458.8	515.3	1190.0	893.1	642.5	507.6	449.8	442.1
52.5°	412.5	417.6	474.2	1037.0	810.9	589.8	462.6	417.6	412.5
55°	366.2	386.8	425.4	880.3	728.6	541.0	416.4	384.2	380.4
57.5°	313.6	340.5	381.7	738.9	651.5	487.0	379.1	353.4	336.7
60°	251.9	284.0	338.0	614.3	583.4	438.2	340.5	300.7	280.1
62.5°	221.0	231.3	298.1	514.0	514.0	391.9	302.0	258.3	249.3
65°	192.8	200.5	255.7	425.4	447.2	340.5	267.3	223.6	215.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	168.3	174.8	195.3	354.7	385.5	296.8	221.0	195.3	186.3
70°	143.9	149.1	167.1	289.1	329.0	253.2	186.3	167.1	160.6
72.5°	122.1	127.2	137.5	217.2	269.9	210.7	156.8	142.6	137.5
75°	101.5	104.1	114.4	161.9	217.2	168.3	125.9	116.9	114.4
77.5°	82.2	83.5	90.0	115.7	168.3	128.5	101.5	93.8	92.5
80°	63.0	64.3	69.4	83.5	123.4	92.5	75.8	72.0	69.4
82.5°	45.0	46.3	48.8	56.5	83.5	63.0	54.0	52.7	48.8
85°	28.3	28.3	30.8	34.7	47.5	36.0	33.4	32.1	30.8
87.5°	12.9	12.9	14.1	14.1	21.8	15.4	15.4	14.1	12.9
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	19.34	20.81	19.71	21.13	21.44	22.04	23.51	22.40	23.82	24.14
	3H	20.46	21.77	20.84	22.10	22.46	23.48	24.79	23.86	25.12	25.48
	4H	20.90	22.13	21.30	22.48	22.86	23.98	25.21	24.38	25.56	25.94
	6H	21.25	22.38	21.66	22.75	23.14	24.31	25.44	24.72	25.81	26.20
	8H	21.36	22.44	21.79	22.83	23.23	24.40	25.48	24.83	25.87	26.27
	12H	21.44	22.47	21.87	22.85	23.28	24.44	25.48	24.88	25.86	26.29
4H	2H	20.51	21.74	20.91	22.09	22.47	22.49	23.72	22.89	24.07	24.45
	3H	21.74	22.76	22.15	23.16	23.56	24.15	25.17	24.56	25.57	25.97
	4H	22.22	23.14	22.65	23.55	23.99	24.79	25.70	25.22	26.12	26.56
	6H	22.62	23.42	23.08	23.86	24.32	25.24	26.04	25.70	26.48	26.94
	8H	22.76	23.50	23.22	23.95	24.41	25.37	26.11	25.84	26.56	27.03
	12H	22.86	23.52	23.34	24.00	24.47	25.45	26.11	25.93	26.59	27.07
8H	4H	22.62	23.37	23.09	23.81	24.28	24.90	25.64	25.37	26.09	26.56
	6H	23.11	23.73	23.61	24.22	24.70	25.46	26.07	25.96	26.57	27.05
	8H	23.30	23.85	23.82	24.36	24.85	25.66	26.21	26.18	26.72	27.21
	12H	23.46	23.95	23.97	24.44	25.01	25.81	26.29	26.32	26.79	27.35
12H	4H	22.67	23.33	23.15	23.81	24.28	24.89	25.55	25.37	26.03	26.50
	6H	23.18	23.73	23.70	24.24	24.73	25.46	26.01	25.97	26.52	27.01
	8H	23.42	23.91	23.94	24.40	24.97	25.71	26.19	26.22	26.68	27.25