

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: P735935

Luminaire Tested: S122RDR-S865D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
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: S122RDR-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

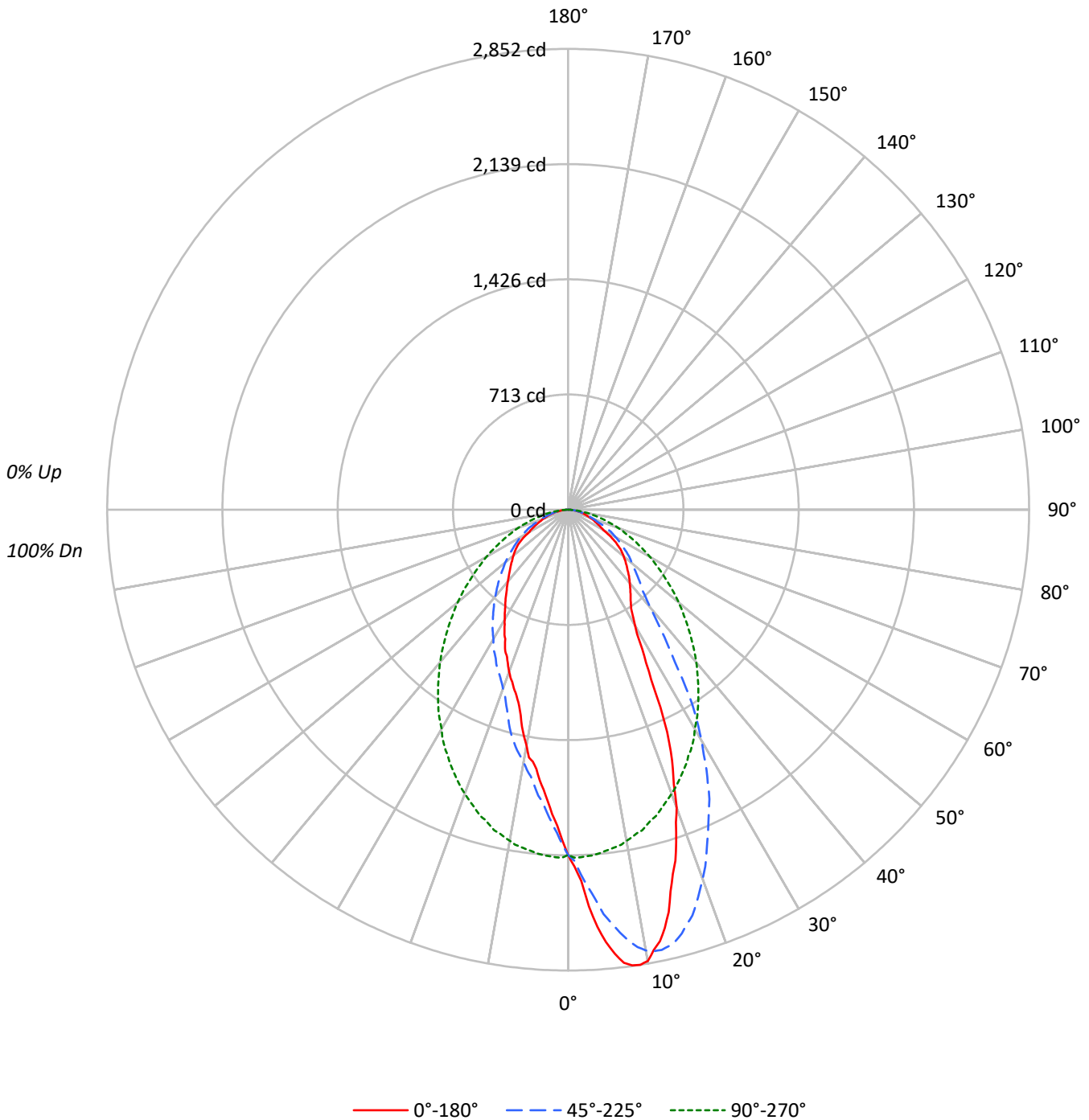
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	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

(END OF REPORT)