

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: P735940

Luminaire Tested: S122RDR-S865D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735940
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-S865D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3152.8 lumens
Efficiency: N/A
Efficacy: 90.1 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

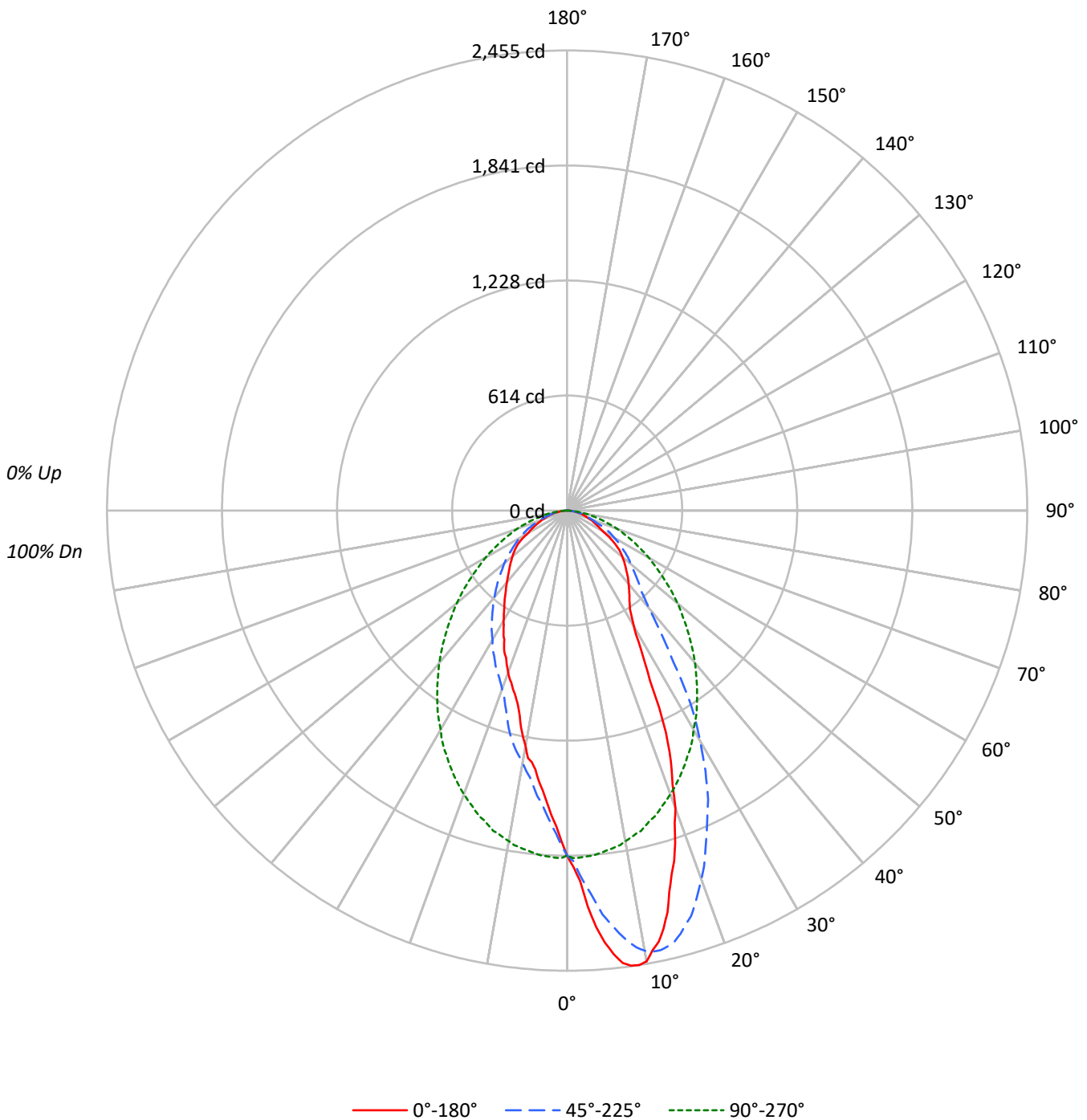
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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																												
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°	35367	35367	35367	35367	35367
5°	44617	41736	35502	30165	28884
10°	47661	46538	34962	26691	24942
15°	41920	46523	34038	23933	20785
20°	34558	42820	32953	20776	18806
25°	24640	37592	31632	19242	16918
30°	15765	31532	29934	17656	15028
35°	13579	23237	28376	16383	13631
40°	12799	16990	26625	15158	12521
45°	12091	14556	24753	14045	11819
50°	11513	13268	22995	13068	11381
55°	10566	12272	21022	12014	10975
60°	8338	11187	19310	11271	9272
65°	7550	10015	17510	10465	8455
70°	6963	8081	15916	9014	7772
75°	6491	7315	13888	8050	7315
80°	5999	6608	11755	7228	6608
85°	5359	5866	9020	6352	5866

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 34647 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.4	5.7
10°-20°	479.5	15.2
20°-30°	601.5	19.1
30°-40°	573.1	18.2
40°-50°	505.6	16.0
50°-60°	397.7	12.6
60°-70°	253.8	8.0
70°-80°	129.0	4.1
80°-90°	34.2	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°	1259.4	39.9
0°-40°	1832.5	58.1
0°-60°	2735.8	86.8
0°-90°	3152.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3152.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1840	1840	1840	1840	1840	
5°	2312	2163	1840	1563	1497	225
15°	2107	2338	1710	1203	1044	584
25°	1162	1772	1492	907	798	524
35°	579	990	1209	698	581	368
45°	445	536	911	517	435	345
55°	315	366	627	358	328	277
65°	166	220	385	230	186	166
75°	87	98	187	108	98	93
85°	24	27	41	29	27	28
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°	1840.0	1840.0	1840.0	1840.0	1840.0	1840.0	1840.0	1840.0	1840.0
1°	1902.0	1910.8	1869.9	1874.3	1854.4	1819.0	1784.7	1788.0	1763.7
2°	1978.3	2001.5	1945.1	1910.8	1853.3	1791.3	1722.7	1713.9	1684.0
3°	2116.6	2105.5	2012.6	1942.9	1848.8	1755.9	1669.6	1649.7	1624.2
4°	2228.4	2195.2	2081.2	1983.8	1846.6	1715.0	1617.6	1583.3	1557.9
5°	2312.4	2270.4	2163.1	2014.8	1840.0	1691.7	1563.4	1524.7	1497.0
6°	2379.9	2347.8	2216.2	2043.6	1831.1	1657.4	1531.3	1479.3	1450.5
7°	2431.9	2405.4	2270.4	2082.3	1823.4	1623.1	1480.4	1426.2	1391.9
8°	2451.9	2439.7	2320.2	2110.0	1814.5	1598.8	1435.0	1386.4	1355.4
9°	2455.2	2456.3	2360.0	2136.5	1806.8	1554.5	1403.0	1353.2	1336.6
10°	2441.9	2451.9	2384.4	2166.4	1791.3	1532.4	1367.5	1320.0	1277.9
11°	2389.9	2434.2	2396.5	2186.3	1778.0	1497.0	1336.6	1274.6	1232.6
12°	2351.2	2393.2	2397.6	2211.8	1762.5	1480.4	1310.0	1227.0	1182.8
13°	2287.0	2331.3	2386.6	2218.4	1753.7	1439.5	1276.8	1178.3	1124.1
14°	2210.7	2281.5	2368.9	2232.8	1731.6	1404.1	1243.6	1109.8	1077.7
15°	2106.6	2207.3	2337.9	2238.3	1710.5	1379.7	1202.7	1075.5	1044.5
16°	2020.3	2134.3	2295.8	2238.3	1697.3	1346.5	1158.4	1045.6	1014.6
17°	1955.1	2048.0	2261.5	2239.4	1675.1	1323.3	1114.2	1017.9	993.6
18°	1863.2	1967.2	2207.3	2235.0	1651.9	1295.6	1076.6	994.7	964.8
19°	1761.4	1885.4	2149.8	2227.2	1632.0	1266.9	1036.7	970.3	944.9
20°	1689.5	1803.5	2093.4	2215.1	1611.0	1248.1	1015.7	942.7	919.4
21°	1568.9	1708.3	2036.9	2198.5	1588.8	1216.0	986.9	918.3	892.9
22.5°	1446.1	1574.5	1932.9	2170.8	1552.3	1176.1	954.9	888.5	850.8
23°	1398.5	1542.4	1900.8	2163.1	1540.2	1166.2	944.9	875.2	842.0
24°	1296.7	1446.1	1834.5	2138.7	1513.6	1133.0	926.1	848.6	825.4
25°	1161.8	1364.2	1772.5	2113.3	1491.5	1108.6	907.3	827.6	797.7
26°	1009.1	1252.5	1716.1	2082.3	1460.5	1075.5	881.8	807.7	765.7
27°	915.0	1156.2	1639.7	2049.1	1438.4	1051.1	860.8	777.8	747.9
28°	839.8	1004.6	1571.1	2017.0	1411.8	1021.2	846.4	756.8	721.4
29°	757.9	921.7	1490.4	1973.9	1383.0	986.9	823.2	735.8	698.2
30°	710.3	833.1	1420.7	1941.8	1348.7	963.7	795.5	714.8	677.1
32.5°	624.0	687.1	1231.5	1850.0	1283.5	897.3	750.2	657.2	625.1
35°	578.7	611.9	990.3	1742.6	1209.3	842.0	698.2	609.6	580.9
37.5°	544.4	564.3	817.7	1627.6	1134.1	793.3	650.6	565.4	537.7
40°	510.1	525.6	677.1	1516.9	1061.1	745.7	604.1	520.0	499.0
42.5°	479.1	491.3	587.5	1407.4	985.8	697.1	558.7	484.6	465.8
45°	444.8	455.8	535.5	1274.6	910.6	647.3	516.7	445.9	434.8
47.5°	416.0	423.8	485.7	1156.2	836.5	599.7	473.6	414.9	407.2
50°	385.0	395.0	443.7	1024.6	769.0	553.2	437.0	387.3	380.6
52.5°	355.2	359.6	408.3	892.9	698.2	507.9	398.3	359.6	355.2
55°	315.3	333.0	366.2	757.9	627.3	465.8	358.5	330.8	327.5
57.5°	270.0	293.2	328.6	636.2	561.0	419.3	326.4	304.3	289.9
60°	216.9	244.5	291.0	528.9	502.3	377.3	293.2	258.9	241.2
62.5°	190.3	199.2	256.7	442.6	442.6	337.5	260.0	222.4	214.6
65°	166.0	172.6	220.2	366.2	385.0	293.2	230.1	192.5	185.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	144.9	150.5	168.2	305.4	331.9	255.6	190.3	168.2	160.4
70°	123.9	128.3	143.8	248.9	283.2	218.0	160.4	143.8	138.3
72.5°	105.1	109.5	118.4	187.0	232.4	181.5	135.0	122.8	118.4
75°	87.4	89.6	98.5	139.4	187.0	144.9	108.4	100.7	98.5
77.5°	70.8	71.9	77.5	99.6	144.9	110.6	87.4	80.8	79.7
80°	54.2	55.3	59.7	71.9	106.2	79.7	65.3	62.0	59.7
82.5°	38.7	39.8	42.0	48.7	71.9	54.2	46.5	45.4	42.0
85°	24.3	24.3	26.6	29.9	40.9	31.0	28.8	27.7	26.6
87.5°	11.1	11.1	12.2	12.2	18.8	13.3	13.3	12.2	11.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)