

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: P735889

Luminaire Tested: S122DR-S865D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735889
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-1)
Test Lab: INNOVATION CENTER
Issue Date: 1/24/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S865D830-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3585.7 lumens
Efficiency: N/A
Efficacy: 102.4 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

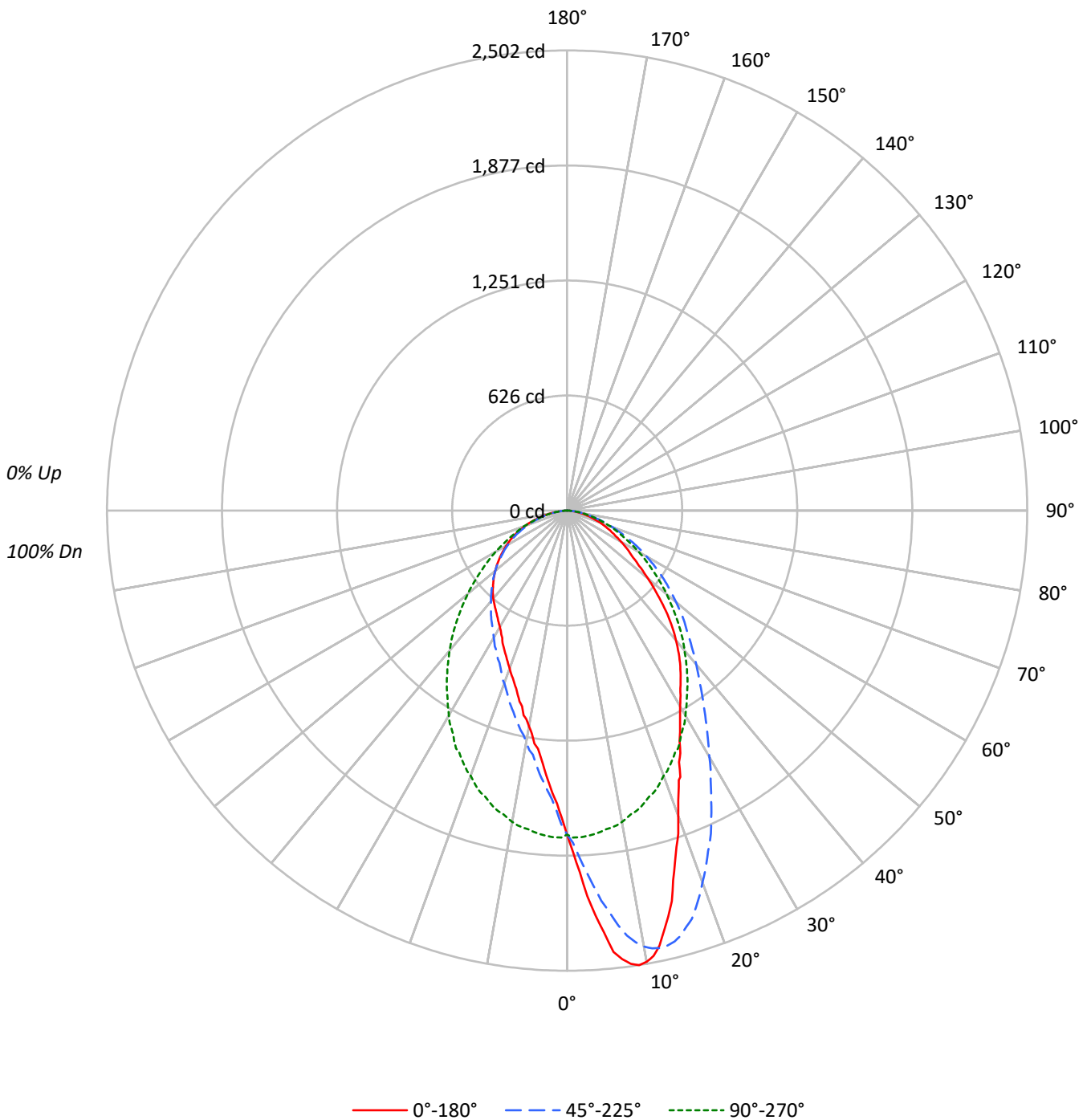
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88					86				
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76					74				
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66					64				
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58					56				
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51					49				
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46					44				
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41					39				
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37					35				
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34					32				
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31					30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	33874	33874	33874	33874	33874
5°	44426	41061	34049	28558	27250
10°	48629	46997	33545	24963	23261
15°	43747	47603	32635	22536	20632
20°	36097	44025	31390	20441	18706
25°	30852	39278	30285	18907	17340
30°	27286	34302	28549	17716	16238
35°	25239	30382	26773	16883	15773
40°	23097	27413	24921	16169	15682
45°	20346	25022	23048	15671	15475
50°	17131	23070	21115	15248	15283
55°	14410	21229	19078	14735	15020
60°	12990	19183	17322	14293	14712
65°	11789	16855	15423	13608	14431
70°	10622	14567	13887	12594	13685
75°	9268	12321	11875	11422	12506
80°	7782	9652	9652	9918	10460
85°	5866	6947	7212	7741	7476

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 36743 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.4	4.8
10°-20°	476.0	13.3
20°-30°	624.2	17.4
30°-40°	659.8	18.4
40°-50°	612.6	17.1
50°-60°	490.3	13.7
60°-70°	335.3	9.4
70°-80°	173.0	4.8
80°-90°	41.1	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°	1273.7	35.5
0°-40°	1933.4	53.9
0°-60°	3036.3	84.7
0°-90°	3585.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3585.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1762	1762	1762	1762	1762	
5°	2302	2128	1765	1480	1412	227
15°	2198	2392	1640	1132	1037	603
25°	1455	1852	1428	892	818	670
35°	1076	1295	1141	720	672	671
45°	748	920	848	576	569	575
55°	430	634	569	440	448	394
65°	259	371	339	299	317	257
75°	125	166	160	154	168	133
85°	27	32	33	35	34	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°	1762.3	1762.3	1762.3	1762.3	1762.3	1762.3	1762.3	1762.3	1762.3
1°	1859.2	1849.5	1807.1	1809.6	1778.1	1742.9	1710.2	1689.7	1672.7
2°	1968.2	1948.9	1882.2	1849.5	1778.1	1703.0	1635.1	1617.0	1594.0
3°	2100.3	2054.2	1962.2	1884.7	1775.6	1666.6	1573.4	1540.7	1537.0
4°	2206.8	2165.7	2043.3	1921.0	1769.6	1631.5	1526.1	1491.0	1474.1
5°	2302.5	2275.9	2128.1	1967.0	1764.7	1597.6	1480.1	1431.7	1412.3
6°	2412.7	2358.2	2195.9	2013.0	1756.3	1564.9	1438.9	1380.8	1354.1
7°	2457.6	2423.6	2272.2	2043.3	1745.4	1527.3	1386.8	1323.9	1304.5
8°	2489.1	2475.7	2332.8	2093.0	1740.5	1492.2	1340.8	1302.1	1279.0
9°	2502.4	2491.5	2376.4	2113.6	1732.0	1474.1	1317.8	1253.6	1228.2
10°	2491.5	2496.3	2407.9	2145.1	1718.7	1436.5	1279.0	1223.3	1191.8
11°	2466.0	2478.2	2424.9	2181.4	1701.8	1406.2	1243.9	1187.0	1156.7
12°	2417.6	2444.2	2432.1	2206.8	1686.0	1379.6	1219.7	1165.2	1138.5
13°	2342.5	2401.8	2427.3	2217.7	1676.3	1349.3	1189.4	1126.4	1092.5
14°	2274.7	2336.4	2414.0	2242.0	1659.4	1315.4	1161.6	1098.6	1069.5
15°	2198.4	2269.8	2392.2	2249.2	1640.0	1287.5	1132.5	1063.5	1036.8
16°	2091.8	2187.5	2352.2	2257.7	1617.0	1256.0	1105.8	1040.4	1005.3
17°	2003.4	2106.3	2321.9	2262.6	1604.9	1231.8	1082.8	1005.3	982.3
18°	1922.2	2038.5	2267.4	2258.9	1585.5	1204.0	1048.9	979.9	958.1
19°	1858.0	1952.5	2212.9	2250.4	1558.8	1177.3	1023.5	961.7	936.3
20°	1764.7	1873.8	2152.3	2246.8	1534.6	1153.1	999.3	936.3	914.5
21°	1687.2	1798.7	2096.6	2234.7	1517.7	1130.1	981.1	912.0	892.7
22.5°	1585.5	1683.6	2003.4	2211.7	1480.1	1091.3	941.1	889.0	862.4
23°	1573.4	1656.9	1979.1	2204.4	1469.2	1082.8	927.8	875.7	853.9
24°	1497.1	1585.5	1922.2	2181.4	1441.4	1056.2	906.0	860.0	834.5
25°	1454.7	1527.3	1852.0	2159.6	1428.0	1032.0	891.5	839.4	817.6
26°	1395.3	1478.9	1789.0	2128.1	1399.0	1010.2	868.4	821.2	800.6
27°	1351.7	1422.0	1723.6	2105.1	1365.0	987.1	850.3	803.0	777.6
28°	1309.3	1377.2	1660.6	2067.6	1340.8	961.7	837.0	787.3	763.1
29°	1265.7	1325.1	1609.7	2038.5	1317.8	939.9	816.4	766.7	743.7
30°	1229.4	1283.9	1545.5	1999.7	1286.3	914.5	798.2	752.2	731.6
32.5°	1145.8	1191.8	1414.7	1907.7	1211.2	863.6	754.6	712.2	700.1
35°	1075.6	1105.8	1294.8	1804.7	1141.0	809.1	719.5	678.3	672.2
37.5°	1001.7	1030.7	1185.8	1696.9	1067.1	759.4	679.5	652.8	648.0
40°	920.5	959.3	1092.5	1590.3	993.2	711.0	644.4	623.8	625.0
42.5°	839.4	884.2	1001.7	1465.6	924.2	665.0	610.5	595.9	598.3
45°	748.5	805.5	920.5	1351.7	847.9	621.4	576.5	569.3	569.3
47.5°	654.1	726.7	850.3	1234.2	775.2	577.8	543.8	539.0	541.4
50°	572.9	638.3	771.5	1120.4	706.1	537.8	509.9	508.7	511.1
52.5°	493.0	558.4	702.5	1013.8	635.9	501.4	477.2	477.2	479.6
55°	430.0	480.9	633.5	902.4	569.3	459.1	439.7	443.3	448.2
57.5°	386.4	420.3	565.6	795.8	507.5	417.9	405.8	408.2	414.2
60°	337.9	364.6	499.0	697.7	450.6	377.9	371.8	376.7	382.7
62.5°	294.3	317.3	436.0	609.2	388.8	339.1	336.7	344.0	350.0
65°	259.2	274.9	370.6	519.6	339.1	300.4	299.2	310.1	317.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	222.9	235.0	313.7	434.8	289.5	261.6	261.6	273.7	279.8
70°	189.0	198.6	259.2	358.5	247.1	222.9	224.1	238.6	243.5
72.5°	153.8	162.3	210.8	288.3	199.9	186.5	190.2	202.3	207.1
75°	124.8	130.8	165.9	227.7	159.9	149.0	153.8	164.7	168.4
77.5°	95.7	100.5	122.3	167.1	122.3	116.3	121.1	130.8	130.8
80°	70.3	71.5	87.2	117.5	87.2	83.6	89.6	94.5	94.5
82.5°	46.0	48.4	56.9	75.1	58.1	56.9	59.3	63.0	63.0
85°	26.6	27.9	31.5	41.2	32.7	32.7	35.1	35.1	33.9
87.5°	10.9	12.1	13.3	15.7	14.5	15.7	15.7	13.3	14.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)