

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: P735890

Luminaire Tested: S122DR-S865D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735890
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-S865D835-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3804.3 lumens
Efficiency: N/A
Efficacy: 108.7 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

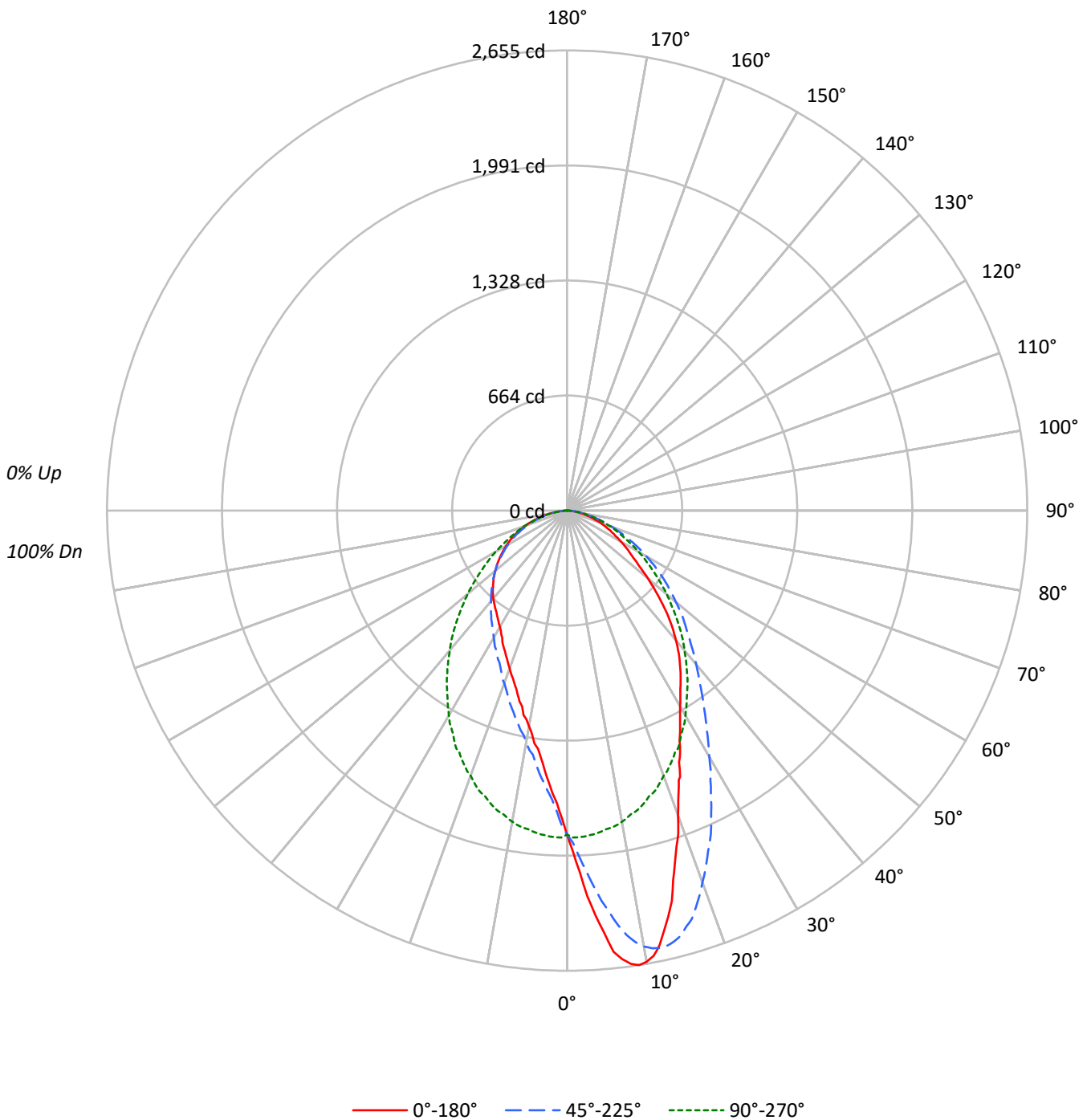
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	35940	35940	35940	35940	35940
5°	47135	43564	36125	30298	28911
10°	51593	49862	35591	26486	24680
15°	46413	50504	34625	23909	21889
20°	38298	46709	33305	21686	19845
25°	32733	41670	32133	20059	18396
30°	28949	36393	30289	18797	17228
35°	26776	32234	28404	17911	16735
40°	24504	29084	26439	17153	16638
45°	21589	26547	24451	16628	16419
50°	18175	24479	22403	16178	16216
55°	15288	22523	20241	15633	15935
60°	13782	20351	18376	15166	15612
65°	12507	17883	16364	14436	15314
70°	11268	15455	14735	13359	14516
75°	9833	13078	12595	12120	13264
80°	8246	10239	10239	10527	11091
85°	6241	7366	7653	8226	7939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 38983 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.0	4.8
10°-20°	505.0	13.3
20°-30°	662.3	17.4
30°-40°	700.0	18.4
40°-50°	649.9	17.1
50°-60°	520.2	13.7
60°-70°	355.7	9.4
70°-80°	183.6	4.8
80°-90°	43.6	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°	1351.3	35.5
0°-40°	2051.3	53.9
0°-60°	3221.4	84.7
0°-90°	3804.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3804.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1870	1870	1870	1870	1870	
5°	2443	2258	1872	1570	1498	241
15°	2332	2538	1740	1202	1100	640
25°	1543	1965	1515	946	867	711
35°	1141	1374	1210	763	713	712
45°	794	977	900	612	604	610
55°	456	672	604	466	476	418
65°	275	393	360	317	337	273
75°	132	176	170	163	179	141
85°	28	33	35	37	36	34
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°	1869.8	1869.8	1869.8	1869.8	1869.8	1869.8	1869.8	1869.8	1869.8
1°	1972.6	1962.3	1917.3	1919.9	1886.5	1849.2	1814.5	1792.7	1774.7
2°	2088.2	2067.7	1997.0	1962.3	1886.5	1806.8	1734.8	1715.5	1691.1
3°	2228.3	2179.5	2081.8	1999.5	1883.9	1768.2	1669.3	1634.6	1630.7
4°	2341.4	2297.7	2167.9	2038.1	1877.5	1731.0	1619.2	1581.9	1563.9
5°	2442.9	2414.6	2257.8	2086.9	1872.3	1695.0	1570.3	1518.9	1498.4
6°	2559.8	2502.0	2329.8	2135.8	1863.3	1660.3	1526.6	1465.0	1436.7
7°	2607.4	2571.4	2410.8	2167.9	1851.8	1620.5	1471.4	1404.6	1384.0
8°	2640.8	2626.7	2475.0	2220.6	1846.6	1583.2	1422.6	1381.4	1357.0
9°	2654.9	2643.4	2521.3	2242.4	1837.6	1563.9	1398.1	1330.0	1303.0
10°	2643.4	2648.5	2554.7	2275.8	1823.5	1524.1	1357.0	1297.9	1264.5
11°	2616.4	2629.2	2572.7	2314.4	1805.5	1491.9	1319.8	1259.4	1227.2
12°	2565.0	2593.2	2580.4	2341.4	1788.8	1463.7	1294.1	1236.2	1208.0
13°	2485.3	2548.3	2575.3	2352.9	1778.5	1431.6	1261.9	1195.1	1159.1
14°	2413.3	2478.9	2561.1	2378.6	1760.5	1395.6	1232.4	1165.5	1134.7
15°	2332.4	2408.2	2538.0	2386.3	1740.0	1366.0	1201.5	1128.3	1100.0
16°	2219.3	2320.8	2495.6	2395.3	1715.5	1332.6	1173.3	1103.9	1066.6
17°	2125.5	2234.7	2463.5	2400.5	1702.7	1306.9	1148.8	1066.6	1042.2
18°	2039.4	2162.7	2405.6	2396.6	1682.1	1277.3	1112.9	1039.6	1016.5
19°	1971.3	2071.5	2347.8	2387.6	1653.9	1249.1	1085.9	1020.3	993.3
20°	1872.3	1988.0	2283.5	2383.8	1628.2	1223.4	1060.2	993.3	970.2
21°	1790.1	1908.3	2224.4	2370.9	1610.2	1199.0	1040.9	967.6	947.1
22.5°	1682.1	1786.2	2125.5	2346.5	1570.3	1157.8	998.5	943.2	915.0
23°	1669.3	1758.0	2099.8	2338.8	1558.8	1148.8	984.4	929.1	906.0
24°	1588.3	1682.1	2039.4	2314.4	1529.2	1120.6	961.2	912.4	885.4
25°	1543.4	1620.5	1964.8	2291.3	1515.1	1094.9	945.8	890.5	867.4
26°	1480.4	1569.1	1898.0	2257.8	1484.2	1071.7	921.4	871.3	849.4
27°	1434.1	1508.7	1828.6	2233.4	1448.3	1047.3	902.1	852.0	825.0
28°	1389.1	1461.1	1761.8	2193.6	1422.6	1020.3	888.0	835.3	809.6
29°	1342.9	1405.9	1707.8	2162.7	1398.1	997.2	866.1	813.4	789.0
30°	1304.3	1362.2	1639.7	2121.6	1364.7	970.2	846.9	798.0	776.2
32.5°	1215.7	1264.5	1500.9	2024.0	1285.1	916.2	800.6	755.6	742.8
35°	1141.1	1173.3	1373.7	1914.7	1210.5	858.4	763.3	719.6	713.2
37.5°	1062.7	1093.6	1258.1	1800.4	1132.1	805.7	720.9	692.6	687.5
40°	976.6	1017.8	1159.1	1687.3	1053.7	754.3	683.6	661.8	663.1
42.5°	890.5	938.1	1062.7	1554.9	980.5	705.5	647.7	632.2	634.8
45°	794.2	854.6	976.6	1434.1	899.5	659.2	611.7	604.0	604.0
47.5°	693.9	771.0	902.1	1309.5	822.4	613.0	577.0	571.8	574.4
50°	607.8	677.2	818.6	1188.7	749.2	570.6	541.0	539.7	542.3
52.5°	523.0	592.4	745.3	1075.6	674.7	532.0	506.3	506.3	508.9
55°	456.2	510.2	672.1	957.4	604.0	487.0	466.5	470.3	475.5
57.5°	409.9	445.9	600.1	844.3	538.4	443.3	430.5	433.1	439.5
60°	358.5	386.8	529.4	740.2	478.0	400.9	394.5	399.7	406.1
62.5°	312.3	336.7	462.6	646.4	412.5	359.8	357.2	365.0	371.4
65°	275.0	291.7	393.2	551.3	359.8	318.7	317.4	329.0	336.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	236.5	249.3	332.8	461.3	307.1	277.6	277.6	290.4	296.8
70°	200.5	210.7	275.0	380.4	262.2	236.5	237.7	253.2	258.3
72.5°	163.2	172.2	223.6	305.8	212.0	197.9	201.8	214.6	219.7
75°	132.4	138.8	176.1	241.6	169.6	158.1	163.2	174.8	178.6
77.5°	101.5	106.7	129.8	177.3	129.8	123.4	128.5	138.8	138.8
80°	74.5	75.8	92.5	124.7	92.5	88.7	95.1	100.2	100.2
82.5°	48.8	51.4	60.4	79.7	61.7	60.4	63.0	66.8	66.8
85°	28.3	29.6	33.4	43.7	34.7	34.7	37.3	37.3	36.0
87.5°	11.6	12.9	14.1	16.7	15.4	16.7	16.7	14.1	15.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)