

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: P735853

Luminaire Tested: S122DR-S1005D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735853
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-S1005D830-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: 4208.2 lumens
Efficiency: N/A
Efficacy: 100.7 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

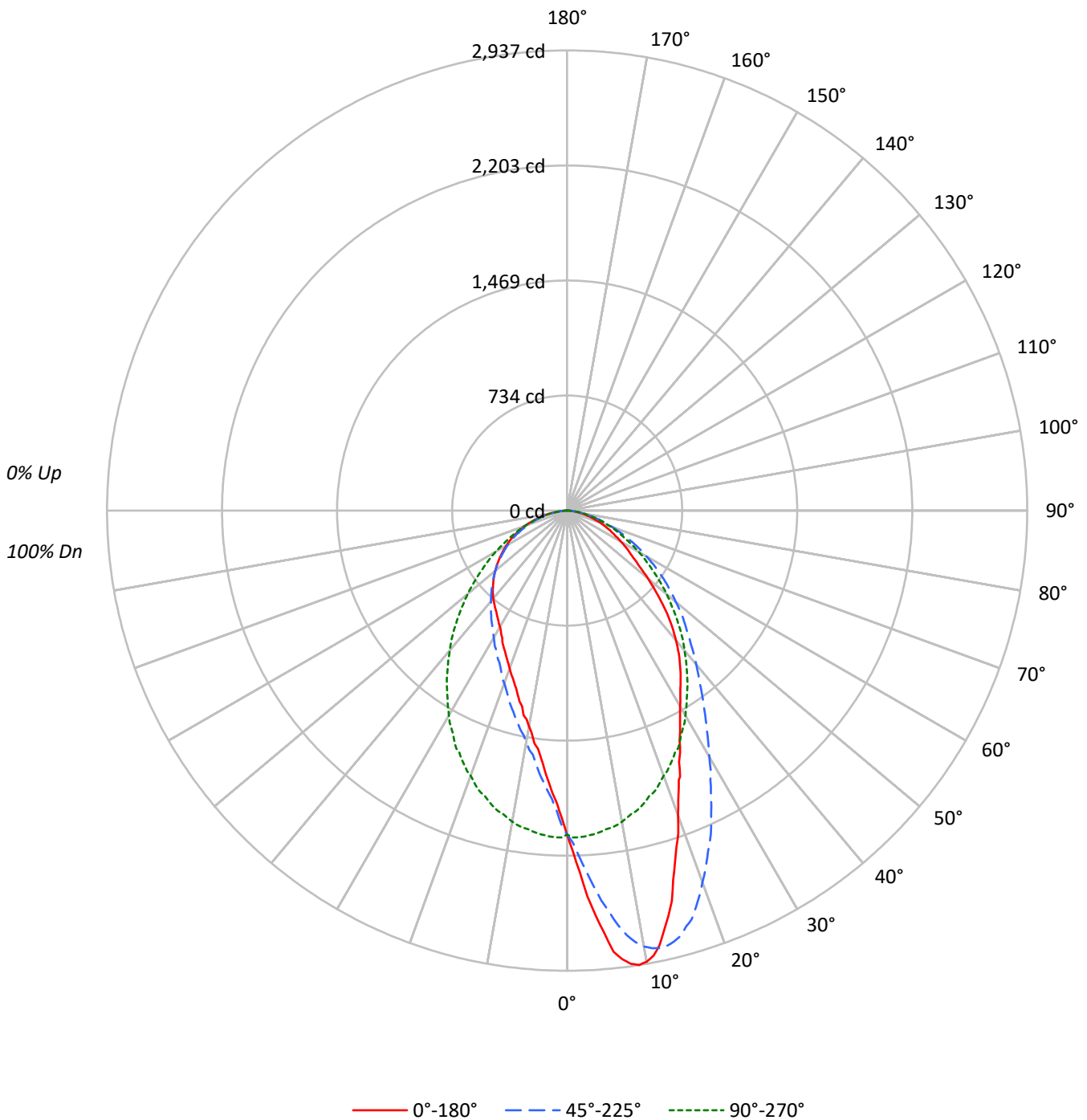
Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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
RW	70	50	30	10	70	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	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°	39755	39755	39755	39755	39755
5°	52138	48189	39961	33517	31979
10°	57070	55155	39369	29298	27300
15°	51340	55865	38300	26448	24214
20°	42364	51669	36839	23987	21952
25°	36207	46094	35543	22188	20349
30°	32023	40257	33505	20792	19056
35°	29620	35657	31419	19814	18511
40°	27106	32172	29247	18974	18405
45°	23880	29366	27047	18392	18161
50°	20107	27077	24781	17894	17939
55°	16910	24912	22389	17292	17624
60°	15246	22516	20328	16776	17268
65°	13835	19784	18102	15969	16937
70°	12465	17096	16298	14780	16056
75°	10872	14459	13932	13405	14675
80°	9121	11324	11324	11645	12276
85°	6903	8160	8469	9086	8777

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 43123 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.5	4.8
10°-20°	558.6	13.3
20°-30°	732.6	17.4
30°-40°	774.3	18.4
40°-50°	718.9	17.1
50°-60°	575.4	13.7
60°-70°	393.5	9.4
70°-80°	203.1	4.8
80°-90°	48.2	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°	1494.8	35.5
0°-40°	2269.1	53.9
0°-60°	3563.4	84.7
0°-90°	4208.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4208.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2068	2068	2068	2068	2068	
5°	2702	2498	2071	1737	1657	266
15°	2580	2807	1925	1329	1217	708
25°	1707	2173	1676	1046	960	787
35°	1262	1520	1339	844	789	788
45°	878	1080	995	677	668	675
55°	505	743	668	516	526	462
65°	304	435	398	351	372	302
75°	146	195	188	180	198	156
85°	31	37	38	41	40	38
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°	2068.3	2068.3	2068.3	2068.3	2068.3	2068.3	2068.3	2068.3	2068.3
1°	2182.0	2170.6	2120.9	2123.7	2086.7	2045.5	2007.1	1983.0	1963.1
2°	2309.9	2287.2	2209.0	2170.6	2086.7	1998.6	1919.0	1897.7	1870.7
3°	2464.9	2410.8	2302.8	2211.8	2083.9	1956.0	1846.5	1808.1	1803.9
4°	2589.9	2541.6	2398.0	2254.5	2076.8	1914.7	1791.1	1749.8	1729.9
5°	2702.2	2671.0	2497.5	2308.5	2071.1	1874.9	1737.1	1680.2	1657.4
6°	2831.6	2767.6	2577.1	2362.5	2061.2	1836.6	1688.7	1620.5	1589.2
7°	2884.2	2844.4	2666.7	2398.0	2048.4	1792.5	1627.6	1553.7	1530.9
8°	2921.1	2905.5	2737.8	2456.3	2042.7	1751.3	1573.6	1528.1	1501.1
9°	2936.8	2924.0	2788.9	2480.5	2032.7	1729.9	1546.6	1471.2	1441.4
10°	2924.0	2929.7	2825.9	2517.4	2017.1	1685.9	1501.1	1435.7	1398.7
11°	2894.1	2908.4	2845.8	2560.1	1997.2	1650.3	1459.9	1393.1	1357.5
12°	2837.3	2868.6	2854.3	2589.9	1978.7	1619.1	1431.4	1367.5	1336.2
13°	2749.1	2818.8	2848.7	2602.7	1967.3	1583.5	1395.9	1322.0	1282.2
14°	2669.5	2742.0	2833.0	2631.2	1947.4	1543.7	1363.2	1289.3	1255.2
15°	2580.0	2663.9	2807.4	2639.7	1924.7	1511.0	1329.1	1248.1	1216.8
16°	2454.9	2567.2	2760.5	2649.6	1897.7	1474.1	1297.8	1221.1	1179.8
17°	2351.1	2472.0	2725.0	2655.3	1883.5	1445.6	1270.8	1179.8	1152.8
18°	2255.9	2392.4	2661.0	2651.1	1860.7	1413.0	1231.0	1150.0	1124.4
19°	2180.6	2291.4	2597.0	2641.1	1829.4	1381.7	1201.2	1128.7	1098.8
20°	2071.1	2199.0	2526.0	2636.9	1801.0	1353.3	1172.7	1098.8	1073.2
21°	1980.1	2110.9	2460.6	2622.6	1781.1	1326.2	1151.4	1070.4	1047.6
22.5°	1860.7	1975.9	2351.1	2595.6	1737.1	1280.8	1104.5	1043.4	1012.1
23°	1846.5	1944.6	2322.7	2587.1	1724.3	1270.8	1088.9	1027.7	1002.1
24°	1757.0	1860.7	2255.9	2560.1	1691.6	1239.5	1063.3	1009.3	979.4
25°	1707.2	1792.5	2173.4	2534.5	1675.9	1211.1	1046.2	985.1	959.5
26°	1637.5	1735.6	2099.5	2497.5	1641.8	1185.5	1019.2	963.8	939.6
27°	1586.4	1668.8	2022.8	2470.5	1602.0	1158.5	997.9	942.4	912.6
28°	1536.6	1616.2	1948.9	2426.5	1573.6	1128.7	982.2	924.0	895.5
29°	1485.4	1555.1	1889.2	2392.4	1546.6	1103.1	958.1	899.8	872.8
30°	1442.8	1506.8	1813.8	2346.9	1509.6	1073.2	936.8	882.7	858.6
32.5°	1344.7	1398.7	1660.3	2238.8	1421.5	1013.5	885.6	835.8	821.6
35°	1262.3	1297.8	1519.6	2118.0	1339.0	949.6	844.4	796.0	788.9
37.5°	1175.6	1209.7	1391.6	1991.5	1252.3	891.3	797.5	766.2	760.5
40°	1080.3	1125.8	1282.2	1866.4	1165.6	834.4	756.2	732.1	733.5
42.5°	985.1	1037.7	1175.6	1720.0	1084.6	780.4	716.4	699.4	702.2
45°	878.5	945.3	1080.3	1586.4	995.0	729.2	676.6	668.1	668.1
47.5°	767.6	852.9	997.9	1448.5	909.7	678.0	638.2	632.6	635.4
50°	672.4	749.1	905.5	1314.9	828.7	631.1	598.4	597.0	599.9
52.5°	578.5	655.3	824.5	1189.8	746.3	588.5	560.1	560.1	562.9
55°	504.6	564.3	743.4	1059.0	668.1	538.7	516.0	520.3	525.9
57.5°	453.5	493.3	663.8	933.9	595.6	490.4	476.2	479.0	486.1
60°	396.6	427.9	585.7	818.8	528.8	443.5	436.4	442.1	449.2
62.5°	345.4	372.4	511.7	715.0	456.3	398.0	395.2	403.7	410.8
65°	304.2	322.7	435.0	609.8	398.0	352.5	351.1	363.9	372.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	261.6	275.8	368.2	510.3	339.7	307.0	307.0	321.3	328.4
70°	221.8	233.1	304.2	420.8	290.0	261.6	263.0	280.0	285.7
72.5°	180.5	190.5	247.3	338.3	234.5	218.9	223.2	237.4	243.1
75°	146.4	153.5	194.7	267.2	187.6	174.8	180.5	193.3	197.6
77.5°	112.3	118.0	143.6	196.2	143.6	136.5	142.1	153.5	153.5
80°	82.4	83.9	102.3	137.9	102.3	98.1	105.2	110.9	110.9
82.5°	54.0	56.9	66.8	88.1	68.2	66.8	69.7	73.9	73.9
85°	31.3	32.7	37.0	48.3	38.4	38.4	41.2	41.2	39.8
87.5°	12.8	14.2	15.6	18.5	17.1	18.5	18.5	15.6	17.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)