

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: P735897

Luminaire Tested: S122DR-S865D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735897
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-S865D950-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3629.3 lumens
Efficiency: N/A
Efficacy: 103.7 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

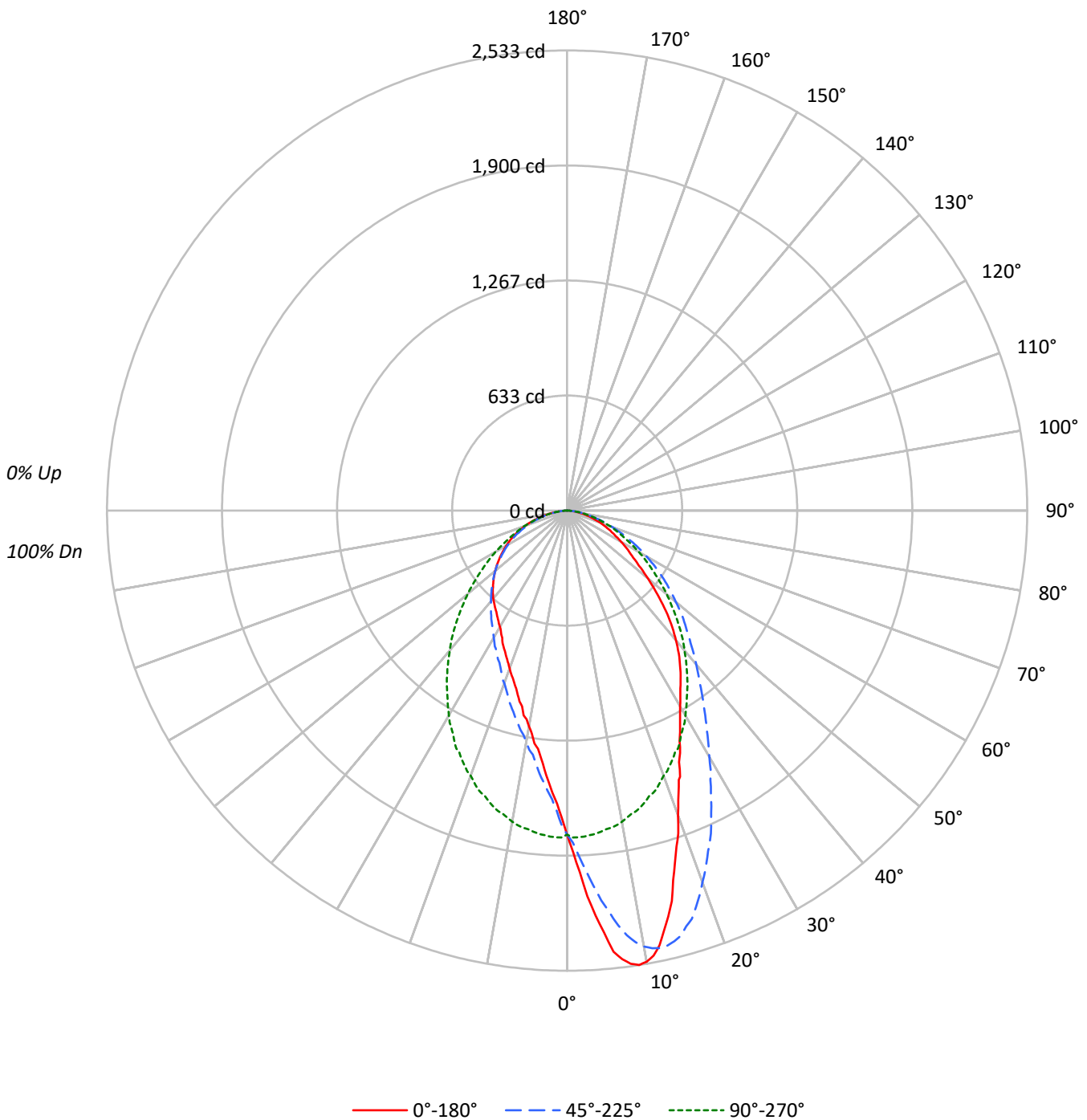
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	34285	34285	34285	34285	34285
5°	44966	41561	34464	28905	27580
10°	49220	47569	33953	25268	23544
15°	44278	48180	33031	22811	20882
20°	36536	44561	31773	20688	18933
25°	31227	39755	30655	19136	17550
30°	27617	34719	28898	17931	16435
35°	25544	30751	27097	17087	15965
40°	23378	27746	25225	16365	15873
45°	20594	25326	23328	15861	15663
50°	17341	23351	21372	15433	15469
55°	14584	21487	19309	14913	15201
60°	13147	19417	17534	14470	14893
65°	11934	17060	15614	13772	14609
70°	10745	14747	14055	12746	13847
75°	9380	12477	12016	11563	12655
80°	7870	9774	9774	10040	10582
85°	5955	7035	7300	7851	7565

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 37192 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.5	4.8
10°-20°	481.8	13.3
20°-30°	631.8	17.4
30°-40°	667.8	18.4
40°-50°	620.0	17.1
50°-60°	496.2	13.7
60°-70°	339.4	9.4
70°-80°	175.1	4.8
80°-90°	41.6	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°	1289.1	35.5
0°-40°	1956.9	53.9
0°-60°	3073.2	84.7
0°-90°	3629.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3629.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1784	1784	1784	1784	1784	
5°	2330	2154	1786	1498	1429	230
15°	2225	2421	1660	1146	1049	611
25°	1472	1874	1445	902	828	679
35°	1089	1310	1155	728	680	679
45°	758	932	858	584	576	582
55°	435	641	576	445	454	399
65°	262	375	343	303	321	260
75°	126	168	162	156	170	134
85°	27	32	33	36	34	33
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°	1783.7	1783.7	1783.7	1783.7	1783.7	1783.7	1783.7	1783.7	1783.7
1°	1881.8	1872.0	1829.1	1831.6	1799.7	1764.1	1731.0	1710.2	1693.0
2°	1992.2	1972.5	1905.1	1872.0	1799.7	1723.7	1655.0	1636.6	1613.3
3°	2125.8	2079.2	1986.0	1907.6	1797.2	1686.9	1592.5	1559.4	1555.7
4°	2233.7	2192.0	2068.2	1944.3	1791.1	1651.3	1544.7	1509.1	1492.0
5°	2330.5	2303.5	2154.0	1990.9	1786.2	1617.0	1498.1	1449.1	1429.4
6°	2442.1	2386.9	2222.6	2037.5	1777.6	1583.9	1456.4	1397.6	1370.6
7°	2487.4	2453.1	2299.9	2068.2	1766.6	1545.9	1403.7	1340.0	1320.3
8°	2519.3	2505.8	2361.2	2118.4	1761.7	1510.4	1357.1	1317.9	1294.6
9°	2532.8	2521.8	2405.3	2139.3	1753.1	1492.0	1333.8	1268.9	1243.1
10°	2521.8	2526.7	2437.2	2171.1	1739.6	1454.0	1294.6	1238.2	1206.3
11°	2496.0	2508.3	2454.3	2207.9	1722.4	1423.3	1259.0	1201.4	1170.8
12°	2447.0	2474.0	2461.7	2233.7	1706.5	1396.3	1234.5	1179.4	1152.4
13°	2371.0	2431.0	2456.8	2244.7	1696.7	1365.7	1203.9	1140.1	1105.8
14°	2302.3	2364.8	2443.3	2269.2	1679.5	1331.4	1175.7	1111.9	1082.5
15°	2225.1	2297.4	2421.2	2276.6	1659.9	1303.2	1146.3	1076.4	1049.4
16°	2117.2	2214.1	2380.8	2285.2	1636.6	1271.3	1119.3	1053.1	1017.5
17°	2027.7	2131.9	2350.1	2290.1	1624.4	1246.8	1096.0	1017.5	994.2
18°	1945.6	2063.3	2295.0	2286.4	1604.8	1218.6	1061.7	991.8	969.7
19°	1880.6	1976.2	2239.8	2277.8	1577.8	1191.6	1035.9	973.4	947.7
20°	1786.2	1896.5	2178.5	2274.1	1553.3	1167.1	1011.4	947.7	925.6
21°	1707.7	1820.5	2122.1	2261.9	1536.1	1143.8	993.0	923.1	903.5
22.5°	1604.8	1704.1	2027.7	2238.6	1498.1	1104.6	952.6	899.8	872.9
23°	1592.5	1677.1	2003.2	2231.2	1487.1	1096.0	939.1	886.4	864.3
24°	1515.3	1604.8	1945.6	2207.9	1458.9	1069.0	917.0	870.4	844.7
25°	1472.4	1545.9	1874.5	2185.9	1445.4	1044.5	902.3	849.6	827.5
26°	1412.3	1496.9	1810.7	2154.0	1416.0	1022.4	879.0	831.2	810.3
27°	1368.2	1439.3	1744.5	2130.7	1381.6	999.1	860.6	812.8	787.1
28°	1325.2	1393.9	1680.8	2092.7	1357.1	973.4	847.1	796.9	772.3
29°	1281.1	1341.2	1629.3	2063.3	1333.8	951.3	826.3	776.0	752.7
30°	1244.3	1299.5	1564.3	2024.0	1302.0	925.6	807.9	761.3	740.5
32.5°	1159.7	1206.3	1431.9	1930.9	1225.9	874.1	763.8	720.9	708.6
35°	1088.6	1119.3	1310.5	1826.7	1154.8	818.9	728.2	686.5	680.4
37.5°	1013.9	1043.3	1200.2	1717.5	1080.1	768.7	687.8	660.8	655.9
40°	931.7	970.9	1105.8	1609.7	1005.3	719.6	652.2	631.4	632.6
42.5°	849.6	894.9	1013.9	1483.4	935.4	673.0	617.9	603.2	605.6
45°	757.6	815.3	931.7	1368.2	858.2	628.9	583.5	576.2	576.2
47.5°	662.0	735.6	860.6	1249.2	784.6	584.8	550.4	545.5	548.0
50°	579.9	646.1	780.9	1134.0	714.7	544.3	516.1	514.9	517.3
52.5°	499.0	565.2	711.0	1026.1	643.6	507.5	483.0	483.0	485.5
55°	435.2	486.7	641.2	913.3	576.2	464.6	445.0	448.7	453.6
57.5°	391.1	425.4	572.5	805.4	513.7	423.0	410.7	413.1	419.3
60°	342.0	369.0	505.1	706.1	456.1	382.5	376.4	381.3	387.4
62.5°	297.9	321.2	441.3	616.6	393.5	343.3	340.8	348.2	354.3
65°	262.4	278.3	375.1	525.9	343.3	304.0	302.8	313.8	321.2



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	225.6	237.8	317.5	440.1	293.0	264.8	264.8	277.1	283.2
70°	191.2	201.1	262.4	362.9	250.1	225.6	226.8	241.5	246.4
72.5°	155.7	164.3	213.3	291.8	202.3	188.8	192.5	204.7	209.6
75°	126.3	132.4	168.0	230.5	161.8	150.8	155.7	166.7	170.4
77.5°	96.8	101.8	123.8	169.2	123.8	117.7	122.6	132.4	132.4
80°	71.1	72.3	88.3	118.9	88.3	84.6	90.7	95.6	95.6
82.5°	46.6	49.0	57.6	76.0	58.8	57.6	60.1	63.7	63.7
85°	27.0	28.2	31.9	41.7	33.1	33.1	35.6	35.6	34.3
87.5°	11.0	12.3	13.5	15.9	14.7	15.9	15.9	13.5	14.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)