

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: P735927

Luminaire Tested: S122RDR-S675D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735927  
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-S675D840-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2877.6 lumens  
Efficiency: N/A  
Efficacy: 109.4 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

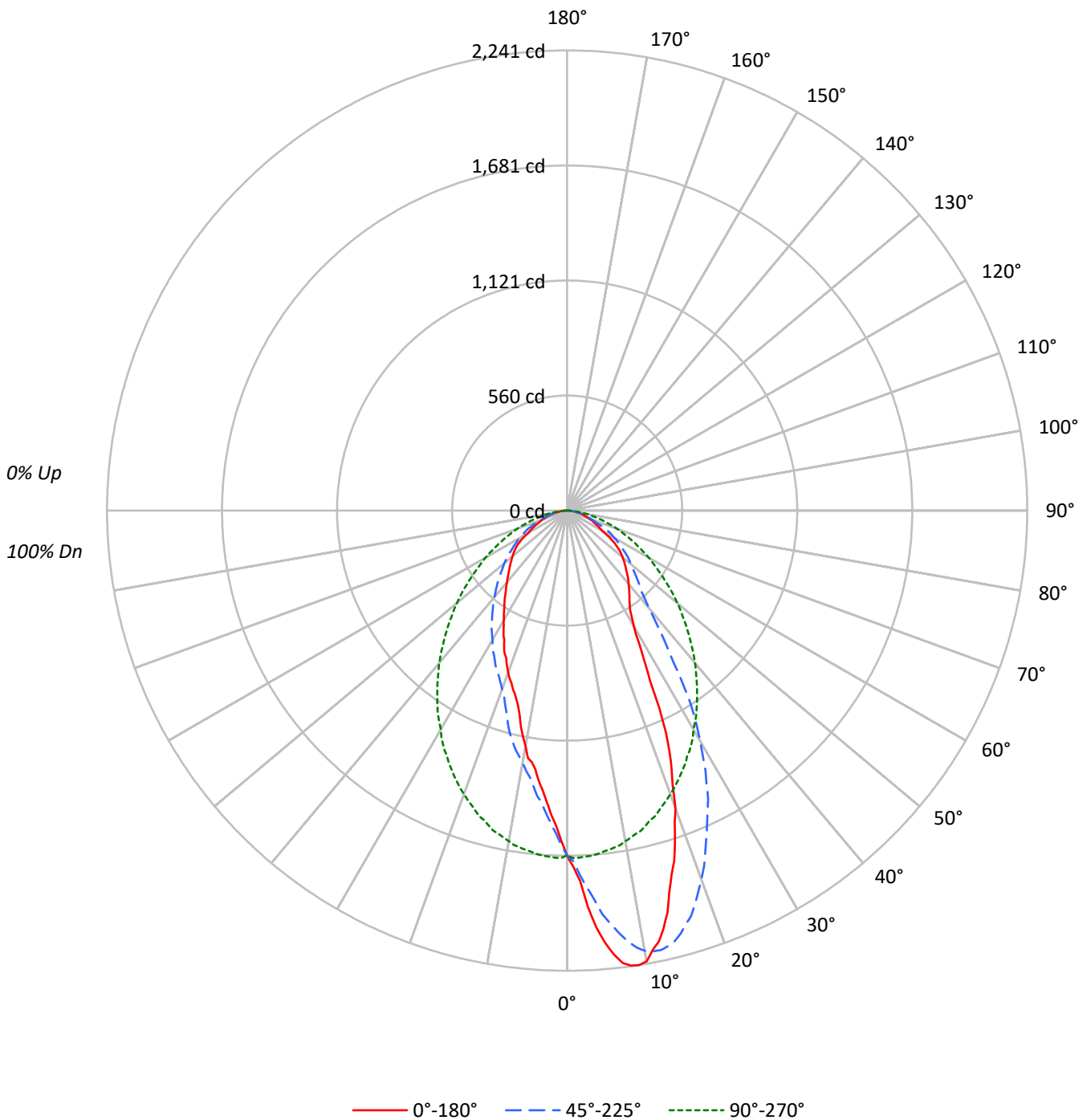
Input Watts (W): 26.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	32280	32280	32280	32280	32280
5°	40723	38094	32404	27532	26362
10°	43501	42477	31912	24362	22766
15°	38262	42461	31069	21843	18970
20°	31543	39083	30077	18964	17166
25°	22489	34311	28871	17563	15442
30°	14389	28780	27322	16116	13716
35°	12394	21208	25900	14952	12441
40°	11680	15507	24301	13836	11427
45°	11036	13287	22592	12819	10789
50°	10508	12111	20989	11928	10388
55°	9645	11203	19189	10965	10017
60°	7608	10210	17626	10287	8465
65°	6890	9142	15982	9556	7718
70°	6356	7379	14528	8228	7092
75°	5926	6676	12677	7352	6676
80°	5479	6033	10726	6597	6033
85°	4896	5337	8248	5800	5337

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 31625 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.9	5.7
10°-20°	437.7	15.2
20°-30°	549.0	19.1
30°-40°	523.1	18.2
40°-50°	461.5	16.0
50°-60°	363.0	12.6
60°-70°	231.6	8.0
70°-80°	117.7	4.1
80°-90°	31.2	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°	1149.5	39.9
0°-40°	1672.6	58.1
0°-60°	2497.0	86.8
0°-90°	2877.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2877.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1679	1679	1679	1679	1679	
5°	2111	1974	1679	1427	1366	205
15°	1923	2134	1561	1098	953	533
25°	1060	1618	1361	828	728	478
35°	528	904	1104	637	530	336
45°	406	489	831	472	397	315
55°	288	334	573	327	299	253
65°	152	201	351	210	170	152
75°	80	90	171	99	90	85
85°	22	24	37	26	24	25
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°	1679.4	1679.4	1679.4	1679.4	1679.4	1679.4	1679.4	1679.4	1679.4
1°	1736.0	1744.0	1706.7	1710.7	1692.5	1660.2	1628.9	1631.9	1609.7
2°	1805.6	1826.8	1775.3	1744.0	1691.5	1635.0	1572.4	1564.3	1537.0
3°	1931.9	1921.8	1836.9	1773.3	1687.5	1602.7	1523.9	1505.7	1482.5
4°	2033.9	2003.6	1899.6	1810.7	1685.5	1565.3	1476.4	1445.1	1421.9
5°	2110.6	2072.2	1974.3	1839.0	1679.4	1544.1	1426.9	1391.6	1366.3
6°	2172.2	2142.9	2022.8	1865.2	1671.3	1512.8	1397.7	1350.2	1323.9
7°	2219.7	2195.4	2072.2	1900.6	1664.3	1481.5	1351.2	1301.7	1270.4
8°	2237.9	2226.8	2117.7	1925.8	1656.2	1459.3	1309.8	1265.4	1237.1
9°	2240.9	2241.9	2154.0	1950.1	1649.1	1418.9	1280.5	1235.1	1219.9
10°	2228.8	2237.9	2176.3	1977.3	1635.0	1398.7	1248.2	1204.8	1166.4
11°	2181.3	2221.7	2187.4	1995.5	1622.9	1366.3	1219.9	1163.4	1125.0
12°	2146.0	2184.3	2188.4	2018.7	1608.7	1351.2	1195.7	1119.9	1079.5
13°	2087.4	2127.8	2178.3	2024.8	1600.6	1313.8	1165.4	1075.5	1026.0
14°	2017.7	2082.3	2162.1	2037.9	1580.4	1281.5	1135.1	1012.9	983.6
15°	1922.8	2014.7	2133.8	2043.0	1561.3	1259.3	1097.7	981.6	953.3
16°	1844.0	1948.0	2095.5	2043.0	1549.1	1229.0	1057.3	954.3	926.0
17°	1784.4	1869.3	2064.2	2044.0	1528.9	1207.8	1016.9	929.1	906.9
18°	1700.6	1795.5	2014.7	2039.9	1507.7	1182.6	982.6	907.9	880.6
19°	1607.7	1720.8	1962.2	2032.9	1489.6	1156.3	946.2	885.7	862.4
20°	1542.1	1646.1	1910.7	2021.8	1470.4	1139.1	927.1	860.4	839.2
21°	1432.0	1559.2	1859.2	2006.6	1450.2	1109.8	900.8	838.2	815.0
22.5°	1319.9	1437.0	1764.2	1981.4	1416.8	1073.5	871.5	810.9	776.6
23°	1276.5	1407.8	1735.0	1974.3	1405.7	1064.4	862.4	798.8	768.5
24°	1183.6	1319.9	1674.4	1952.1	1381.5	1034.1	845.3	774.6	753.4
25°	1060.4	1245.2	1617.8	1928.8	1361.3	1011.9	828.1	755.4	728.1
26°	921.0	1143.2	1566.3	1900.6	1333.0	981.6	804.9	737.2	698.8
27°	835.2	1055.3	1496.6	1870.3	1312.8	959.4	785.7	709.9	682.7
28°	766.5	917.0	1434.0	1841.0	1288.6	932.1	772.5	690.7	658.4
29°	691.8	841.2	1360.3	1801.6	1262.3	900.8	751.3	671.6	637.2
30°	648.3	760.4	1296.7	1772.3	1231.0	879.6	726.1	652.4	618.0
32.5°	569.6	627.1	1124.0	1688.5	1171.4	819.0	684.7	599.9	570.6
35°	528.2	558.5	903.8	1590.5	1103.8	768.5	637.2	556.4	530.2
37.5°	496.9	515.0	746.3	1485.5	1035.1	724.1	593.8	516.0	490.8
40°	465.5	479.7	618.0	1384.5	968.5	680.6	551.4	474.6	455.4
42.5°	437.3	448.4	536.2	1284.5	899.8	636.2	510.0	442.3	425.2
45°	406.0	416.1	488.8	1163.4	831.1	590.8	471.6	407.0	396.9
47.5°	379.7	386.8	443.3	1055.3	763.5	547.3	432.2	378.7	371.6
50°	351.4	360.5	405.0	935.1	701.9	504.9	398.9	353.5	347.4
52.5°	324.2	328.2	372.6	815.0	637.2	463.5	363.6	328.2	324.2
55°	287.8	304.0	334.3	691.8	572.6	425.2	327.2	302.0	298.9
57.5°	246.4	267.6	299.9	580.7	512.0	382.7	297.9	277.7	264.6
60°	197.9	223.2	265.6	482.7	458.5	344.4	267.6	236.3	220.2
62.5°	173.7	181.8	234.3	403.9	403.9	308.0	237.3	203.0	195.9
65°	151.5	157.5	201.0	334.3	351.4	267.6	210.1	175.7	169.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	132.3	137.3	153.5	278.7	303.0	233.3	173.7	153.5	146.4
70°	113.1	117.1	131.3	227.2	258.5	198.9	146.4	131.3	126.2
72.5°	95.9	100.0	108.1	170.7	212.1	165.6	123.2	112.1	108.1
75°	79.8	81.8	89.9	127.2	170.7	132.3	99.0	91.9	89.9
77.5°	64.6	65.6	70.7	90.9	132.3	101.0	79.8	73.7	72.7
80°	49.5	50.5	54.5	65.6	96.9	72.7	59.6	56.6	54.5
82.5°	35.3	36.4	38.4	44.4	65.6	49.5	42.4	41.4	38.4
85°	22.2	22.2	24.2	27.3	37.4	28.3	26.3	25.2	24.2
87.5°	10.1	10.1	11.1	11.1	17.2	12.1	12.1	11.1	10.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)