

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: P735939

Luminaire Tested: S122RDR-S865D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735939  
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-S865D930-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2985.4 lumens  
Efficiency: N/A  
Efficacy: 85.3 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

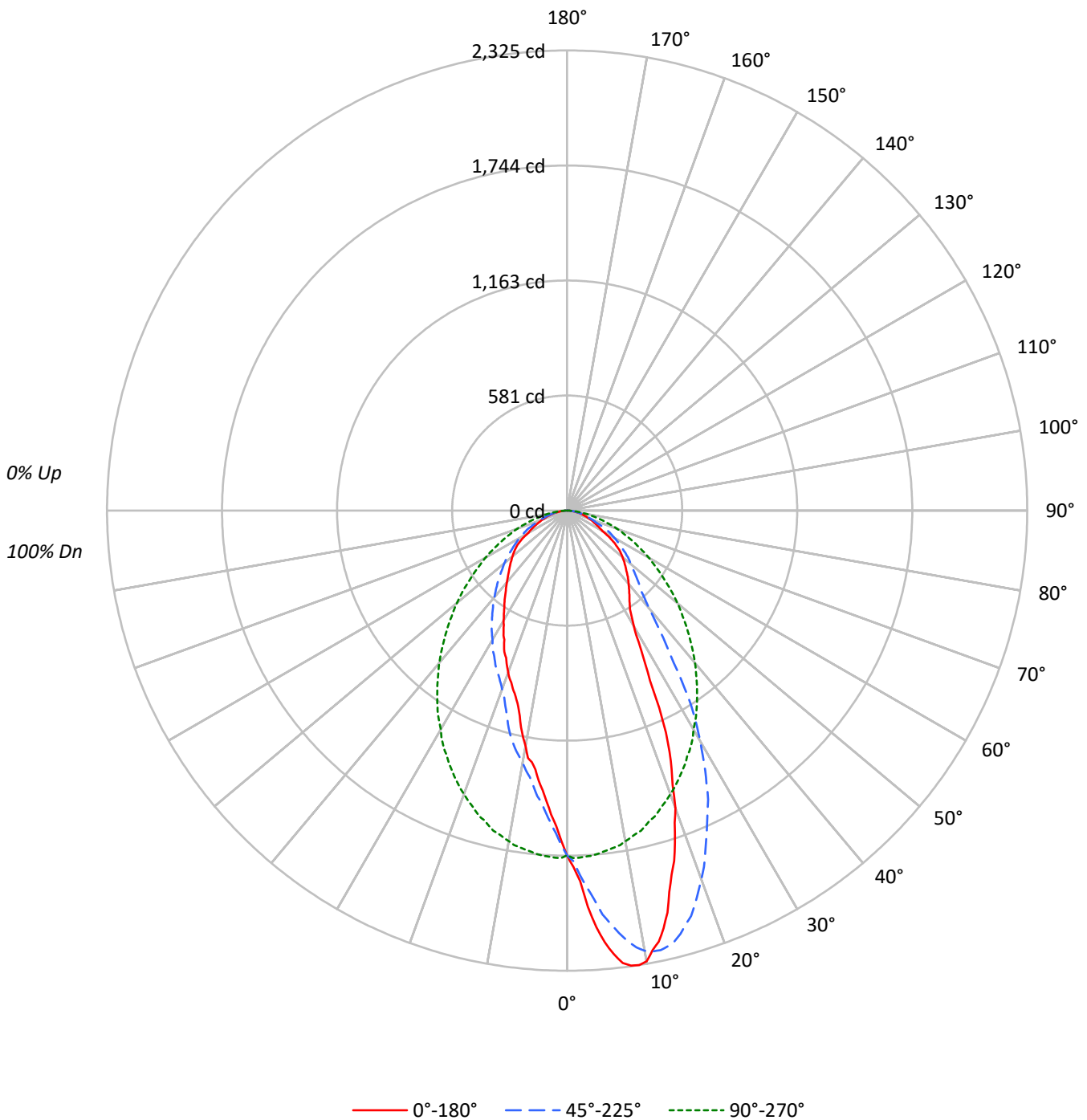
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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°	33489	33489	33489	33489	33489
5°	42250	39521	33617	28564	27350
10°	45131	44067	33106	25276	23618
15°	39695	44053	32233	22663	19680
20°	32724	40548	31204	19673	17808
25°	23331	35596	29953	18220	16021
30°	14928	29859	28347	16719	14231
35°	12856	22003	26870	15513	12906
40°	12119	16089	25210	14352	11856
45°	11449	13784	23440	13301	11191
50°	10903	12562	21775	12374	10777
55°	10006	11622	19906	11377	10392
60°	7896	10591	18287	10672	8780
65°	7150	9483	16583	9910	8005
70°	6592	7654	15073	8537	7362
75°	6149	6922	13152	7627	6922
80°	5678	6265	11136	6841	6265
85°	5072	5536	8557	5999	5536

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 32810 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.0	5.7
10°-20°	454.1	15.2
20°-30°	569.5	19.1
30°-40°	542.7	18.2
40°-50°	478.8	16.0
50°-60°	376.6	12.6
60°-70°	240.3	8.0
70°-80°	122.1	4.1
80°-90°	32.4	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°	1192.6	39.9
0°-40°	1735.2	58.1
0°-60°	2590.6	86.8
0°-90°	2985.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2985.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1742	1742	1742	1742	1742	
5°	2190	2048	1742	1480	1418	213
15°	1995	2214	1620	1139	989	553
25°	1100	1678	1412	859	755	496
35°	548	938	1145	661	550	348
45°	421	507	862	489	412	326
55°	299	347	594	340	310	262
65°	157	208	365	218	176	157
75°	83	93	177	103	93	88
85°	23	25	39	27	25	26
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°	1742.3	1742.3	1742.3	1742.3	1742.3	1742.3	1742.3	1742.3	1742.3
1°	1801.0	1809.4	1770.6	1774.8	1756.0	1722.4	1689.9	1693.1	1670.0
2°	1873.3	1895.3	1841.9	1809.4	1754.9	1696.2	1631.3	1622.9	1594.6
3°	2004.3	1993.8	1905.8	1839.8	1750.7	1662.7	1581.0	1562.1	1538.0
4°	2110.1	2078.6	1970.7	1878.5	1748.6	1623.9	1531.7	1499.3	1475.2
5°	2189.7	2149.9	2048.3	1907.9	1742.3	1601.9	1480.4	1443.7	1417.5
6°	2253.6	2223.2	2098.6	1935.1	1734.0	1569.5	1450.0	1400.8	1373.5
7°	2302.9	2277.7	2149.9	1971.8	1726.6	1537.0	1401.8	1350.5	1318.0
8°	2321.7	2310.2	2197.0	1998.0	1718.2	1513.9	1358.9	1312.8	1283.4
9°	2324.9	2325.9	2234.8	2023.1	1710.9	1472.0	1328.5	1281.3	1265.6
10°	2312.3	2321.7	2257.8	2051.4	1696.2	1451.1	1295.0	1249.9	1210.1
11°	2263.0	2305.0	2269.3	2070.3	1683.7	1417.5	1265.6	1207.0	1167.1
12°	2226.4	2266.2	2270.4	2094.4	1669.0	1401.8	1240.5	1161.9	1120.0
13°	2165.6	2207.5	2259.9	2100.6	1660.6	1363.1	1209.1	1115.8	1064.5
14°	2093.3	2160.4	2243.1	2114.3	1639.7	1329.5	1177.6	1050.8	1020.5
15°	1994.8	2090.2	2213.8	2119.5	1619.8	1306.5	1138.9	1018.4	989.0
16°	1913.1	2021.0	2174.0	2119.5	1607.2	1275.1	1096.9	990.1	960.7
17°	1851.3	1939.3	2141.5	2120.6	1586.2	1253.1	1055.0	963.9	940.8
18°	1764.3	1862.8	2090.2	2116.4	1564.2	1226.9	1019.4	941.9	913.6
19°	1667.9	1785.3	2035.7	2109.0	1545.4	1199.6	981.7	918.8	894.7
20°	1599.8	1707.8	1982.3	2097.5	1525.5	1181.8	961.8	892.6	870.6
21°	1485.6	1617.7	1928.8	2081.8	1504.5	1151.4	934.6	869.6	845.5
22.5°	1369.4	1490.9	1830.3	2055.6	1469.9	1113.7	904.2	841.3	805.7
23°	1324.3	1460.5	1800.0	2048.3	1458.4	1104.3	894.7	828.7	797.3
24°	1227.9	1369.4	1737.1	2025.2	1433.3	1072.9	876.9	803.6	781.6
25°	1100.1	1291.8	1678.4	2001.1	1412.3	1049.8	859.1	783.7	755.4
26°	955.5	1186.0	1625.0	1971.8	1383.0	1018.4	835.0	764.8	725.0
27°	866.5	1094.9	1552.7	1940.4	1362.0	995.3	815.1	736.5	708.2
28°	795.2	951.3	1487.7	1910.0	1336.9	967.0	801.5	716.6	683.1
29°	717.7	872.7	1411.3	1869.1	1309.6	934.6	779.5	696.7	661.1
30°	672.6	788.9	1345.3	1838.7	1277.2	912.6	753.3	676.8	641.2
32.5°	590.9	650.6	1166.1	1751.8	1215.3	849.7	710.3	622.3	592.0
35°	547.9	579.4	937.7	1650.1	1145.1	797.3	661.1	577.3	550.0
37.5°	515.5	534.3	774.3	1541.2	1073.9	751.2	616.1	535.4	509.2
40°	483.0	497.7	641.2	1436.4	1004.7	706.2	572.0	492.4	472.5
42.5°	453.7	465.2	556.3	1332.7	933.5	660.1	529.1	458.9	441.1
45°	421.2	431.7	507.1	1207.0	862.3	612.9	489.3	422.2	411.7
47.5°	393.9	401.3	459.9	1094.9	792.1	567.9	448.4	392.9	385.6
50°	364.6	374.0	420.1	970.2	728.2	523.9	413.8	366.7	360.4
52.5°	336.3	340.5	386.6	845.5	661.1	480.9	377.2	340.5	336.3
55°	298.6	315.4	346.8	717.7	594.0	441.1	339.5	313.3	310.1
57.5°	255.6	277.6	311.2	602.4	531.2	397.1	309.1	288.1	274.5
60°	205.4	231.5	275.5	500.8	475.7	357.3	277.6	245.2	228.4
62.5°	180.2	188.6	243.1	419.1	419.1	319.6	246.2	210.6	203.3
65°	157.2	163.4	208.5	346.8	364.6	277.6	217.9	182.3	176.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	137.2	142.5	159.3	289.2	314.3	242.0	180.2	159.3	151.9
70°	117.3	121.5	136.2	235.7	268.2	206.4	151.9	136.2	131.0
72.5°	99.5	103.7	112.1	177.1	220.0	171.8	127.8	116.3	112.1
75°	82.8	84.9	93.2	132.0	177.1	137.2	102.7	95.3	93.2
77.5°	67.1	68.1	73.3	94.3	137.2	104.8	82.8	76.5	75.4
80°	51.3	52.4	56.6	68.1	100.6	75.4	61.8	58.7	56.6
82.5°	36.7	37.7	39.8	46.1	68.1	51.3	44.0	43.0	39.8
85°	23.0	23.0	25.1	28.3	38.8	29.3	27.2	26.2	25.1
87.5°	10.5	10.5	11.5	11.5	17.8	12.6	12.6	11.5	10.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)