

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: P735919

Luminaire Tested: S122RDR-S485D850-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735919  
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-S485D850-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2282.0 lumens  
Efficiency: N/A  
Efficacy: 116.4 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

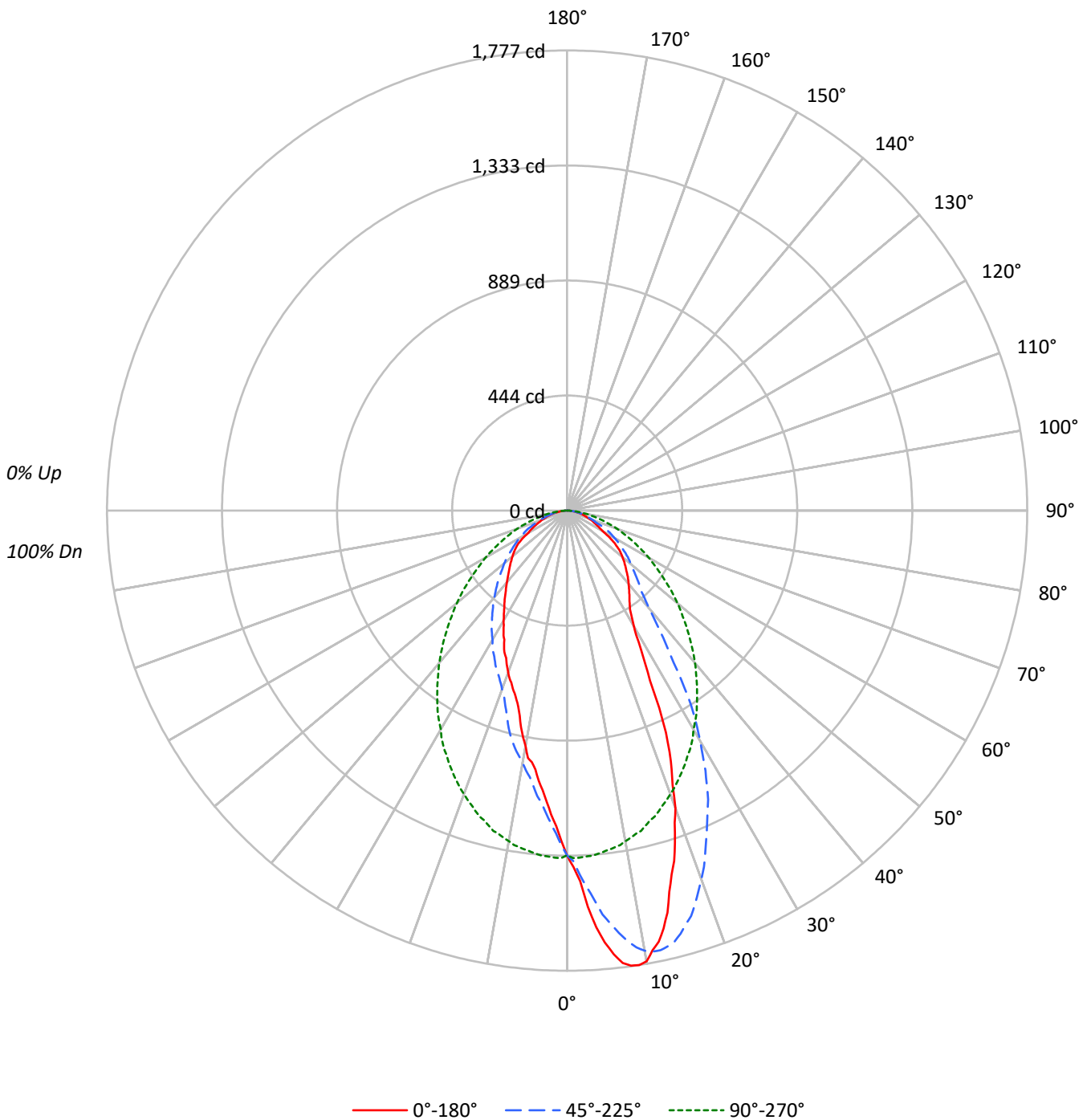
Input Watts (W): 19.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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

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

	0°	45°	90°	135°	180°
0°	25599	25599	25599	25599	25599
5°	32295	30210	25697	21834	20906
10°	34498	33684	25307	19319	18054
15°	30342	33674	24637	17322	15044
20°	25014	30993	23850	15038	13613
25°	17834	27210	22894	13928	12246
30°	11410	22823	21667	12780	10878
35°	9827	16820	20539	11857	9865
40°	9264	12297	19270	10973	9063
45°	8750	10536	17916	10166	8554
50°	8334	9602	16644	9458	8238
55°	7647	8884	15217	8696	7946
60°	6035	8096	13978	8158	6712
65°	5462	7250	12676	7577	6117
70°	5041	5850	11521	6525	5626
75°	4701	5295	10048	5830	5295
80°	4339	4782	8512	5225	4782
85°	3881	4234	6528	4587	4234

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 25079 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.2	5.7
10°-20°	347.1	15.2
20°-30°	435.4	19.1
30°-40°	414.8	18.2
40°-50°	365.9	16.0
50°-60°	287.9	12.6
60°-70°	183.7	8.0
70°-80°	93.4	4.1
80°-90°	24.7	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°	911.6	39.9
0°-40°	1326.4	58.1
0°-60°	1980.2	86.8
0°-90°	2282.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2282.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1332	1332	1332	1332	1332	
5°	1674	1566	1332	1132	1084	163
15°	1525	1692	1238	870	756	422
25°	841	1283	1080	657	577	379
35°	419	717	875	505	420	266
45°	322	388	659	374	315	250
55°	228	265	454	260	237	200
65°	120	159	279	167	134	120
75°	63	71	135	78	71	67
85°	18	19	30	21	19	20
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°	1331.8	1331.8	1331.8	1331.8	1331.8	1331.8	1331.8	1331.8	1331.8
1°	1376.7	1383.1	1353.4	1356.6	1342.2	1316.6	1291.8	1294.2	1276.5
2°	1431.9	1448.7	1407.9	1383.1	1341.4	1296.6	1246.9	1240.5	1218.9
3°	1532.0	1524.0	1456.7	1406.3	1338.2	1270.9	1208.5	1194.1	1175.6
4°	1612.9	1588.9	1506.4	1435.9	1336.6	1241.3	1170.8	1146.0	1127.6
5°	1673.8	1643.3	1565.7	1458.3	1331.8	1224.5	1131.6	1103.6	1083.5
6°	1722.6	1699.4	1604.1	1479.2	1325.4	1199.7	1108.4	1070.7	1049.9
7°	1760.3	1741.0	1643.3	1507.2	1319.8	1174.8	1071.5	1032.3	1007.5
8°	1774.7	1765.9	1679.4	1527.2	1313.4	1157.2	1038.7	1003.5	981.0
9°	1777.1	1777.9	1708.2	1546.4	1307.8	1125.2	1015.5	979.4	967.4
10°	1767.5	1774.7	1725.8	1568.1	1296.6	1109.2	989.8	955.4	925.0
11°	1729.8	1761.9	1734.6	1582.5	1287.0	1083.5	967.4	922.6	892.1
12°	1701.8	1732.2	1735.4	1600.9	1275.7	1071.5	948.2	888.1	856.1
13°	1655.3	1687.4	1727.4	1605.7	1269.3	1041.9	924.2	852.9	813.7
14°	1600.1	1651.3	1714.6	1616.1	1253.3	1016.3	900.2	803.2	780.0
15°	1524.8	1597.7	1692.2	1620.1	1238.1	998.7	870.5	778.4	756.0
16°	1462.3	1544.8	1661.8	1620.1	1228.5	974.6	838.5	756.8	734.4
17°	1415.1	1482.4	1636.9	1620.9	1212.5	957.8	806.5	736.8	719.2
18°	1348.6	1423.9	1597.7	1617.7	1195.7	937.8	779.2	720.0	698.3
19°	1274.9	1364.6	1556.0	1612.1	1181.2	917.0	750.4	702.3	683.9
20°	1222.9	1305.4	1515.2	1603.3	1166.0	903.4	735.2	682.3	665.5
21°	1135.6	1236.5	1474.4	1591.3	1150.0	880.1	714.4	664.7	646.3
22.5°	1046.7	1139.6	1399.1	1571.3	1123.6	851.3	691.1	643.1	615.9
23°	1012.3	1116.4	1375.9	1565.7	1114.8	844.1	683.9	633.5	609.4
24°	938.6	1046.7	1327.8	1548.0	1095.6	820.1	670.3	614.2	597.4
25°	840.9	987.4	1283.0	1529.6	1079.5	802.4	656.7	599.0	577.4
26°	730.4	906.6	1242.1	1507.2	1057.1	778.4	638.3	584.6	554.2
27°	662.3	836.9	1186.9	1483.2	1041.1	760.8	623.1	563.0	541.4
28°	607.8	727.2	1137.2	1459.9	1021.9	739.2	612.6	547.8	522.2
29°	548.6	667.1	1078.7	1428.7	1001.1	714.4	595.8	532.6	505.3
30°	514.1	603.0	1028.3	1405.5	976.2	697.5	575.8	517.3	490.1
32.5°	451.7	497.3	891.3	1339.0	929.0	649.5	543.0	475.7	452.5
35°	418.8	442.9	716.8	1261.3	875.3	609.4	505.3	441.3	420.4
37.5°	394.0	408.4	591.8	1178.0	820.9	574.2	470.9	409.2	389.2
40°	369.2	380.4	490.1	1098.0	768.0	539.8	437.3	376.4	361.2
42.5°	346.8	355.6	425.2	1018.7	713.6	504.5	404.4	350.8	337.2
45°	321.9	329.9	387.6	922.6	659.1	468.5	374.0	322.7	314.7
47.5°	301.1	306.7	351.6	836.9	605.4	434.1	342.8	300.3	294.7
50°	278.7	285.9	321.1	741.6	556.6	400.4	316.3	280.3	275.5
52.5°	257.1	260.3	295.5	646.3	505.3	367.6	288.3	260.3	257.1
55°	228.2	241.1	265.1	548.6	454.1	337.2	259.5	239.5	237.1
57.5°	195.4	212.2	237.9	460.5	406.0	303.5	236.2	220.2	209.8
60°	157.0	177.0	210.6	382.8	363.6	273.1	212.2	187.4	174.6
62.5°	137.7	144.2	185.8	320.3	320.3	244.3	188.2	161.0	155.4
65°	120.1	124.9	159.4	265.1	278.7	212.2	166.6	139.3	134.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	104.9	108.9	121.7	221.0	240.3	185.0	137.7	121.7	116.1
70°	89.7	92.9	104.1	180.2	205.0	157.8	116.1	104.1	100.1
72.5°	76.1	79.3	85.7	135.3	168.2	131.3	97.7	88.9	85.7
75°	63.3	64.9	71.3	100.9	135.3	104.9	78.5	72.9	71.3
77.5°	51.3	52.1	56.1	72.1	104.9	80.1	63.3	58.5	57.7
80°	39.2	40.0	43.2	52.1	76.9	57.7	47.2	44.8	43.2
82.5°	28.0	28.8	30.4	35.2	52.1	39.2	33.6	32.8	30.4
85°	17.6	17.6	19.2	21.6	29.6	22.4	20.8	20.0	19.2
87.5°	8.0	8.0	8.8	8.8	13.6	9.6	9.6	8.8	8.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)