

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: P735879

Luminaire Tested: S122DR-S485D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735879  
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-S485D950-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: 2039.5 lumens  
Efficiency: N/A  
Efficacy: 104.1 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

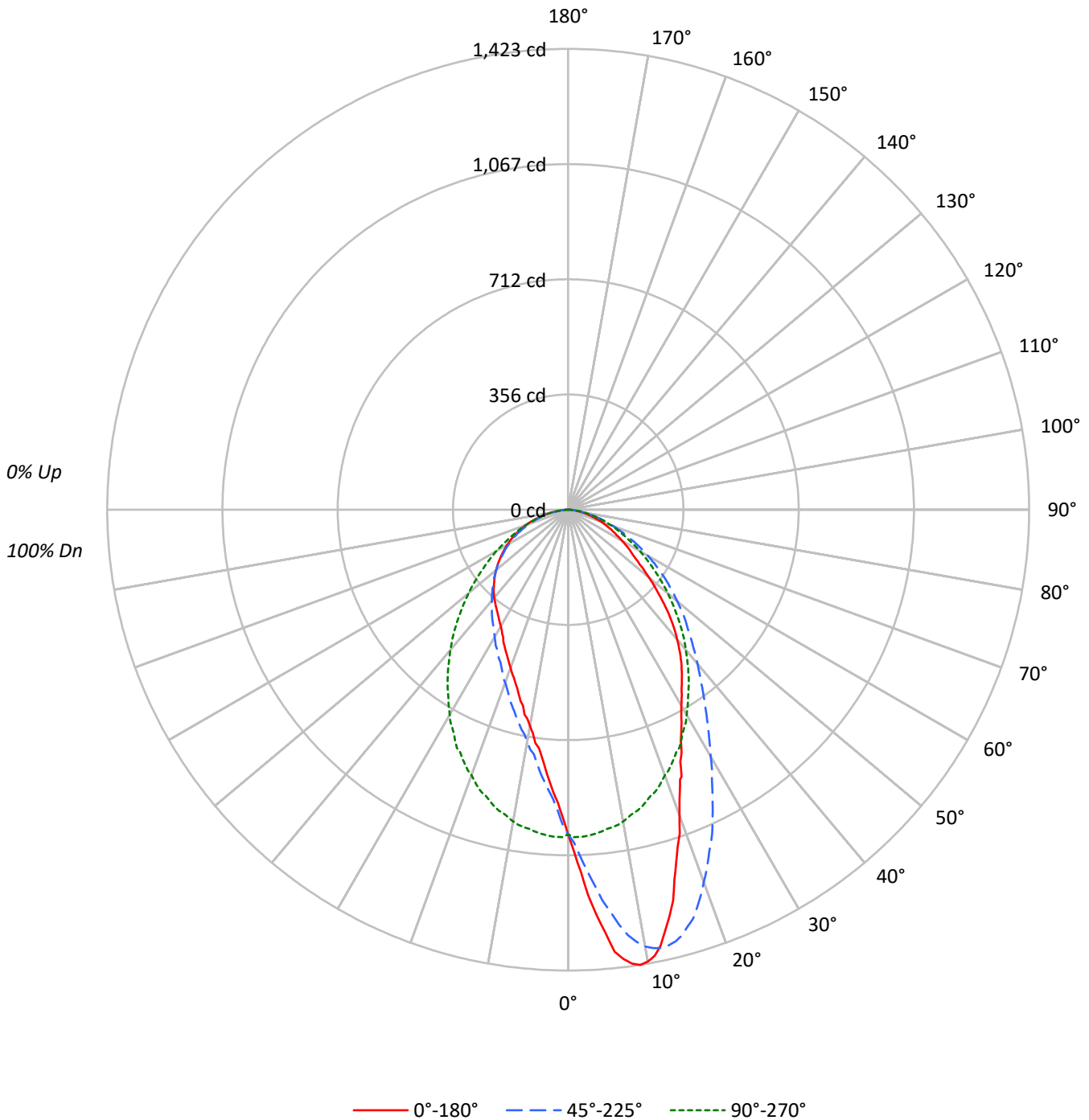
Input Watts (W): 19.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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°	19267	19267	19267	19267	19267
5°	25268	23354	19366	16244	15499
10°	27659	26732	19081	14199	13231
15°	24882	27075	18562	12817	11735
20°	20531	25041	17855	11627	10639
25°	17548	22339	17225	10753	9862
30°	15519	19511	16238	10076	9235
35°	14356	17280	15229	9602	8971
40°	13138	15592	14174	9196	8920
45°	11572	14233	13108	8913	8802
50°	9745	13121	12009	8672	8693
55°	8197	12074	10851	8381	8542
60°	7389	10910	9853	8131	8369
65°	6704	9587	8773	7741	8209
70°	6041	8284	7896	7160	7784
75°	5273	7011	6751	6498	7115
80°	4428	5490	5490	5645	5944
85°	3352	3948	4102	4411	4256

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 20898 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.6	4.8
10°-20°	270.7	13.3
20°-30°	355.0	17.4
30°-40°	375.3	18.4
40°-50°	348.4	17.1
50°-60°	278.9	13.7
60°-70°	190.7	9.4
70°-80°	98.4	4.8
80°-90°	23.4	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°	724.4	35.5
0°-40°	1099.7	53.9
0°-60°	1727.0	84.7
0°-90°	2039.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2039.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1002	1002	1002	1002	1002	
5°	1310	1210	1004	842	803	129
15°	1250	1361	933	644	590	343
25°	827	1053	812	507	465	381
35°	612	736	649	409	382	382
45°	426	524	482	328	324	327
55°	245	360	324	250	255	224
65°	147	211	193	170	180	146
75°	71	94	91	88	96	76
85°	15	18	19	20	19	18
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°	1002.4	1002.4	1002.4	1002.4	1002.4	1002.4	1002.4	1002.4	1002.4
1°	1057.5	1052.0	1027.9	1029.2	1011.3	991.3	972.7	961.0	951.4
2°	1119.5	1108.5	1070.6	1052.0	1011.3	968.6	930.0	919.7	906.6
3°	1194.6	1168.4	1116.0	1072.0	1009.9	947.9	894.9	876.3	874.2
4°	1255.2	1231.8	1162.2	1092.6	1006.5	928.0	868.0	848.1	838.4
5°	1309.6	1294.5	1210.4	1118.8	1003.7	908.7	841.9	814.3	803.3
6°	1372.3	1341.3	1249.0	1145.0	998.9	890.1	818.4	785.4	770.2
7°	1397.8	1378.5	1292.4	1162.2	992.7	868.7	788.8	753.0	742.0
8°	1415.7	1408.1	1326.8	1190.4	990.0	848.7	762.6	740.6	727.5
9°	1423.3	1417.1	1351.6	1202.2	985.1	838.4	749.5	713.0	698.6
10°	1417.1	1419.9	1369.6	1220.1	977.6	817.1	727.5	695.8	677.9
11°	1402.6	1409.5	1379.2	1240.7	967.9	799.8	707.5	675.1	657.9
12°	1375.1	1390.2	1383.3	1255.2	959.0	784.7	693.7	662.7	647.6
13°	1332.4	1366.1	1380.6	1261.4	953.5	767.5	676.5	640.7	621.4
14°	1293.8	1328.9	1373.0	1275.2	943.8	748.2	660.7	624.8	608.3
15°	1250.4	1291.0	1360.6	1279.3	932.8	732.3	644.1	604.9	589.7
16°	1189.8	1244.2	1337.9	1284.1	919.7	714.4	629.0	591.8	571.8
17°	1139.5	1198.0	1320.6	1286.9	912.8	700.6	615.9	571.8	558.7
18°	1093.3	1159.4	1289.6	1284.8	901.8	684.8	596.6	557.3	544.9
19°	1056.8	1110.5	1258.6	1280.0	886.6	669.6	582.1	547.0	532.5
20°	1003.7	1065.8	1224.2	1277.9	872.9	655.8	568.4	532.5	520.1
21°	959.7	1023.0	1192.5	1271.0	863.2	642.8	558.0	518.8	507.7
22.5°	901.8	957.6	1139.5	1258.0	841.9	620.7	535.3	505.7	490.5
23°	894.9	942.4	1125.7	1253.8	835.7	615.9	527.7	498.1	485.7
24°	851.5	901.8	1093.3	1240.7	819.8	600.7	515.3	489.1	474.7
25°	827.4	868.7	1053.3	1228.3	812.2	587.0	507.0	477.4	465.0
26°	793.6	841.2	1017.5	1210.4	795.7	574.6	494.0	467.1	455.4
27°	768.8	808.8	980.3	1197.3	776.4	561.5	483.6	456.8	442.3
28°	744.7	783.3	944.5	1176.0	762.6	547.0	476.0	447.8	434.0
29°	719.9	753.7	915.6	1159.4	749.5	534.6	464.3	436.1	423.0
30°	699.2	730.2	879.1	1137.4	731.6	520.1	454.0	427.8	416.1
32.5°	651.7	677.9	804.7	1085.0	688.9	491.2	429.2	405.1	398.2
35°	611.8	629.0	736.4	1026.5	649.0	460.2	409.2	385.8	382.3
37.5°	569.7	586.3	674.4	965.2	606.9	431.9	386.5	371.3	368.6
40°	523.6	545.6	621.4	904.5	564.9	404.4	366.5	354.8	355.5
42.5°	477.4	502.9	569.7	833.6	525.6	378.2	347.2	338.9	340.3
45°	425.7	458.1	523.6	768.8	482.2	353.4	327.9	323.8	323.8
47.5°	372.0	413.3	483.6	702.0	440.9	328.6	309.3	306.6	307.9
50°	325.9	363.1	438.8	637.2	401.6	305.9	290.0	289.3	290.7
52.5°	280.4	317.6	399.6	576.6	361.7	285.2	271.4	271.4	272.8
55°	244.6	273.5	360.3	513.2	323.8	261.1	250.1	252.1	254.9
57.5°	219.8	239.1	321.7	452.6	288.7	237.7	230.8	232.2	235.6
60°	192.2	207.4	283.8	396.8	256.3	214.9	211.5	214.3	217.7
62.5°	167.4	180.5	248.0	346.5	221.1	192.9	191.5	195.7	199.1
65°	147.4	156.4	210.8	295.5	192.9	170.9	170.2	176.4	180.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	126.8	133.6	178.4	247.3	164.7	148.8	148.8	155.7	159.1
70°	107.5	113.0	147.4	203.9	140.5	126.8	127.4	135.7	138.5
72.5°	87.5	92.3	119.9	164.0	113.7	106.1	108.2	115.0	117.8
75°	71.0	74.4	94.4	129.5	90.9	84.7	87.5	93.7	95.8
77.5°	54.4	57.2	69.6	95.1	69.6	66.1	68.9	74.4	74.4
80°	40.0	40.6	49.6	66.8	49.6	47.5	51.0	53.7	53.7
82.5°	26.2	27.6	32.4	42.7	33.1	32.4	33.8	35.8	35.8
85°	15.2	15.8	17.9	23.4	18.6	18.6	20.0	20.0	19.3
87.5°	6.2	6.9	7.6	9.0	8.3	9.0	9.0	7.6	8.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)