

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: P735918

Luminaire Tested: S122RDR-S485D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735918
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-S485D840-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: 2078.0 lumens
Efficiency: N/A
Efficacy: 106.0 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

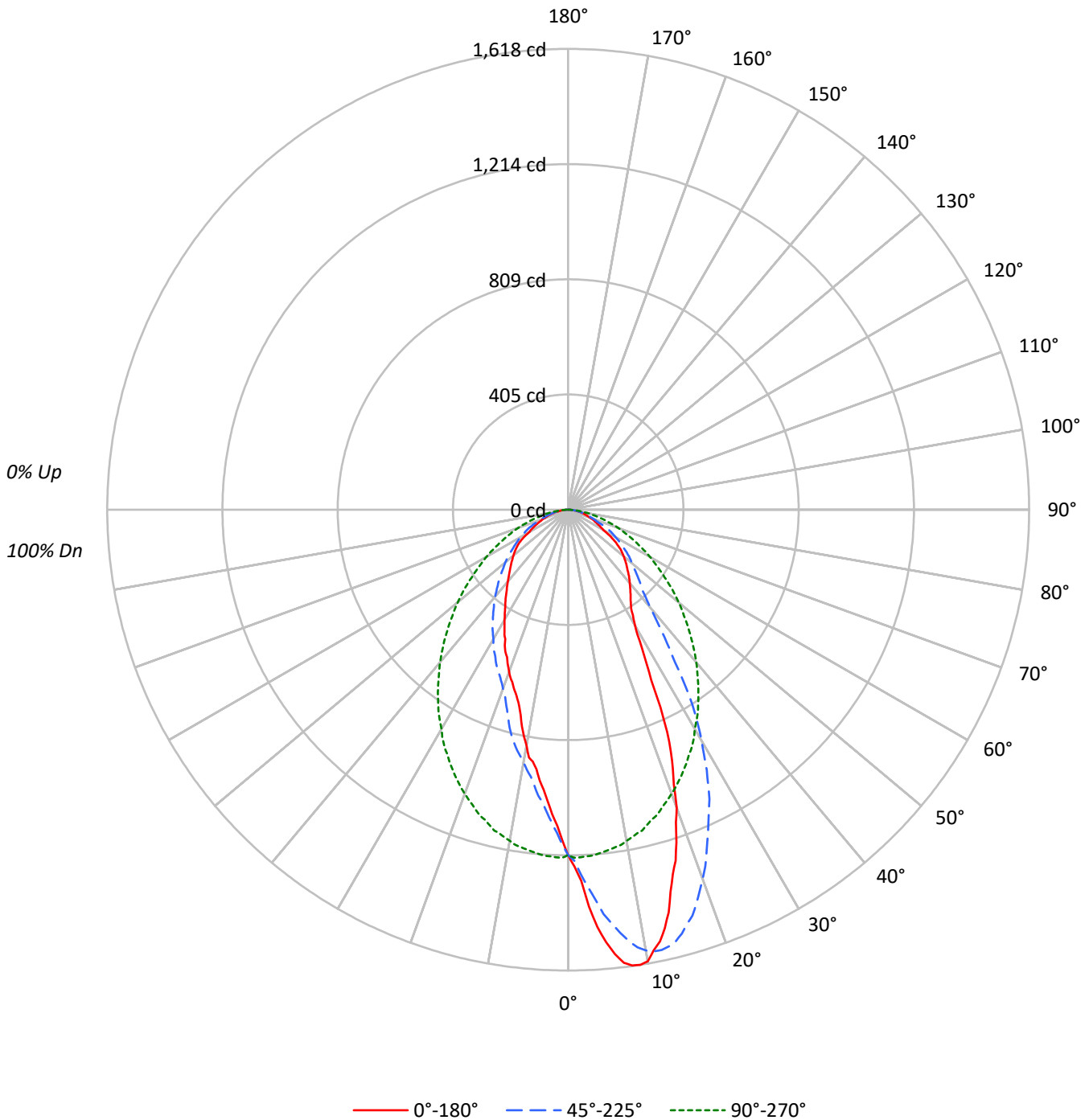
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	23312	23312	23312	23312	23312
5°	29407	27508	23401	19881	19038
10°	31414	30674	23045	17593	16440
15°	27630	30663	22435	15774	13699
20°	22779	28224	21719	13695	12396
25°	16239	24778	20848	12683	11151
30°	10392	20783	19731	11637	9906
35°	8949	15316	18704	10799	8985
40°	8436	11198	17549	9991	8253
45°	7970	9596	16315	9259	7791
50°	7589	8744	15155	8615	7503
55°	6964	8090	13857	7919	7235
60°	5493	7373	12728	7431	6112
65°	4976	6599	11543	6900	5571
70°	4591	5328	10492	5940	5125
75°	4278	4820	9149	5310	4820
80°	3952	4361	7748	4760	4361
85°	3529	3859	5955	4190	3859

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 22836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.6	5.7
10°-20°	316.0	15.2
20°-30°	396.4	19.1
30°-40°	377.7	18.2
40°-50°	333.2	16.0
50°-60°	262.1	12.6
60°-70°	167.3	8.0
70°-80°	85.0	4.1
80°-90°	22.5	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°	830.1	39.9
0°-40°	1207.8	58.1
0°-60°	1803.2	86.8
0°-90°	2078.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2078.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1213	1213	1213	1213	1213	
5°	1524	1426	1213	1030	987	148
15°	1388	1541	1127	793	688	385
25°	766	1168	983	598	526	345
35°	381	653	797	460	383	243
45°	293	353	600	341	287	227
55°	208	241	414	236	216	183
65°	109	145	254	152	122	109
75°	58	65	123	72	65	61
85°	16	18	27	19	18	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°	1212.8	1212.8	1212.8	1212.8	1212.8	1212.8	1212.8	1212.8	1212.8
1°	1253.6	1259.4	1232.4	1235.4	1222.2	1198.9	1176.3	1178.5	1162.4
2°	1303.9	1319.2	1282.0	1259.4	1221.5	1180.7	1135.5	1129.6	1109.9
3°	1395.1	1387.8	1326.5	1280.6	1218.6	1157.3	1100.4	1087.3	1070.6
4°	1468.7	1446.8	1371.7	1307.6	1217.1	1130.3	1066.2	1043.6	1026.8
5°	1524.1	1496.4	1425.7	1328.0	1212.8	1115.0	1030.4	1004.9	986.7
6°	1568.6	1547.5	1460.7	1346.9	1206.9	1092.4	1009.3	975.0	956.1
7°	1602.9	1585.4	1496.4	1372.5	1201.8	1069.8	975.7	940.0	917.4
8°	1616.0	1608.0	1529.3	1390.7	1196.0	1053.8	945.8	913.8	893.3
9°	1618.2	1619.0	1555.5	1408.2	1190.9	1024.6	924.7	891.9	880.9
10°	1609.5	1616.0	1571.6	1427.9	1180.7	1010.0	901.4	870.0	842.3
11°	1575.2	1604.4	1579.6	1441.0	1171.9	986.7	880.9	840.1	812.4
12°	1549.7	1577.4	1580.3	1457.8	1161.7	975.7	863.4	808.7	779.6
13°	1507.4	1536.5	1573.0	1462.2	1155.9	948.8	841.6	776.7	740.9
14°	1457.1	1503.7	1561.3	1471.6	1141.3	925.4	819.7	731.4	710.3
15°	1388.5	1454.9	1540.9	1475.3	1127.4	909.4	792.7	708.8	688.4
16°	1331.6	1406.7	1513.2	1475.3	1118.7	887.5	763.5	689.1	668.7
17°	1288.6	1349.9	1490.6	1476.0	1104.1	872.2	734.4	670.9	654.9
18°	1228.1	1296.6	1454.9	1473.1	1088.8	854.0	709.6	655.6	635.9
19°	1161.0	1242.7	1416.9	1468.0	1075.7	835.0	683.3	639.6	622.8
20°	1113.6	1188.7	1379.8	1460.0	1061.8	822.6	669.5	621.3	606.0
21°	1034.1	1126.0	1342.6	1449.0	1047.2	801.5	650.5	605.3	588.5
22.5°	953.1	1037.7	1274.0	1430.8	1023.1	775.2	629.3	585.6	560.8
23°	921.8	1016.6	1252.9	1425.7	1015.1	768.6	622.8	576.8	555.0
24°	854.7	953.1	1209.1	1409.7	997.6	746.8	610.4	559.3	544.0
25°	765.7	899.2	1168.3	1392.9	983.0	730.7	598.0	545.5	525.8
26°	665.1	825.5	1131.1	1372.5	962.6	708.8	581.2	532.4	504.6
27°	603.1	762.1	1080.8	1350.6	948.0	692.8	567.4	512.7	493.0
28°	553.5	662.2	1035.5	1329.4	930.5	673.1	557.9	498.8	475.5
29°	499.5	607.5	982.3	1301.0	911.6	650.5	542.6	485.0	460.2
30°	468.2	549.1	936.4	1279.8	889.0	635.2	524.3	471.1	446.3
32.5°	411.3	452.9	811.7	1219.3	845.9	591.4	494.4	433.2	412.0
35°	381.4	403.3	652.7	1148.6	797.1	555.0	460.2	401.8	382.9
37.5°	358.8	371.9	538.9	1072.7	747.5	522.9	428.8	372.7	354.4
40°	336.2	346.4	446.3	999.8	699.4	491.5	398.2	342.8	328.9
42.5°	315.8	323.8	387.2	927.6	649.8	459.4	368.3	319.4	307.0
45°	293.2	300.5	353.0	840.1	600.2	426.6	340.6	293.9	286.6
47.5°	274.2	279.3	320.1	762.1	551.3	395.3	312.1	273.5	268.4
50°	253.8	260.3	292.4	675.3	506.8	364.6	288.1	255.2	250.9
52.5°	234.1	237.0	269.1	588.5	460.2	334.7	262.5	237.0	234.1
55°	207.8	219.5	241.4	499.5	413.5	307.0	236.3	218.0	215.9
57.5°	177.9	193.3	216.6	419.3	369.7	276.4	215.1	200.5	191.1
60°	142.9	161.2	191.8	348.6	331.1	248.7	193.3	170.6	159.0
62.5°	125.4	131.3	169.2	291.7	291.7	222.4	171.4	146.6	141.5
65°	109.4	113.8	145.1	241.4	253.8	193.3	151.7	126.9	122.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	95.5	99.2	110.8	201.3	218.8	168.5	125.4	110.8	105.7
70°	81.7	84.6	94.8	164.1	186.7	143.7	105.7	94.8	91.2
72.5°	69.3	72.2	78.0	123.2	153.1	119.6	89.0	80.9	78.0
75°	57.6	59.1	64.9	91.9	123.2	95.5	71.5	66.4	64.9
77.5°	46.7	47.4	51.0	65.6	95.5	72.9	57.6	53.2	52.5
80°	35.7	36.5	39.4	47.4	70.0	52.5	43.0	40.8	39.4
82.5°	25.5	26.3	27.7	32.1	47.4	35.7	30.6	29.9	27.7
85°	16.0	16.0	17.5	19.7	27.0	20.4	19.0	18.2	17.5
87.5°	7.3	7.3	8.0	8.0	12.4	8.8	8.8	8.0	7.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)