

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 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: S122RDRP-S485D840-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122RDRP-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

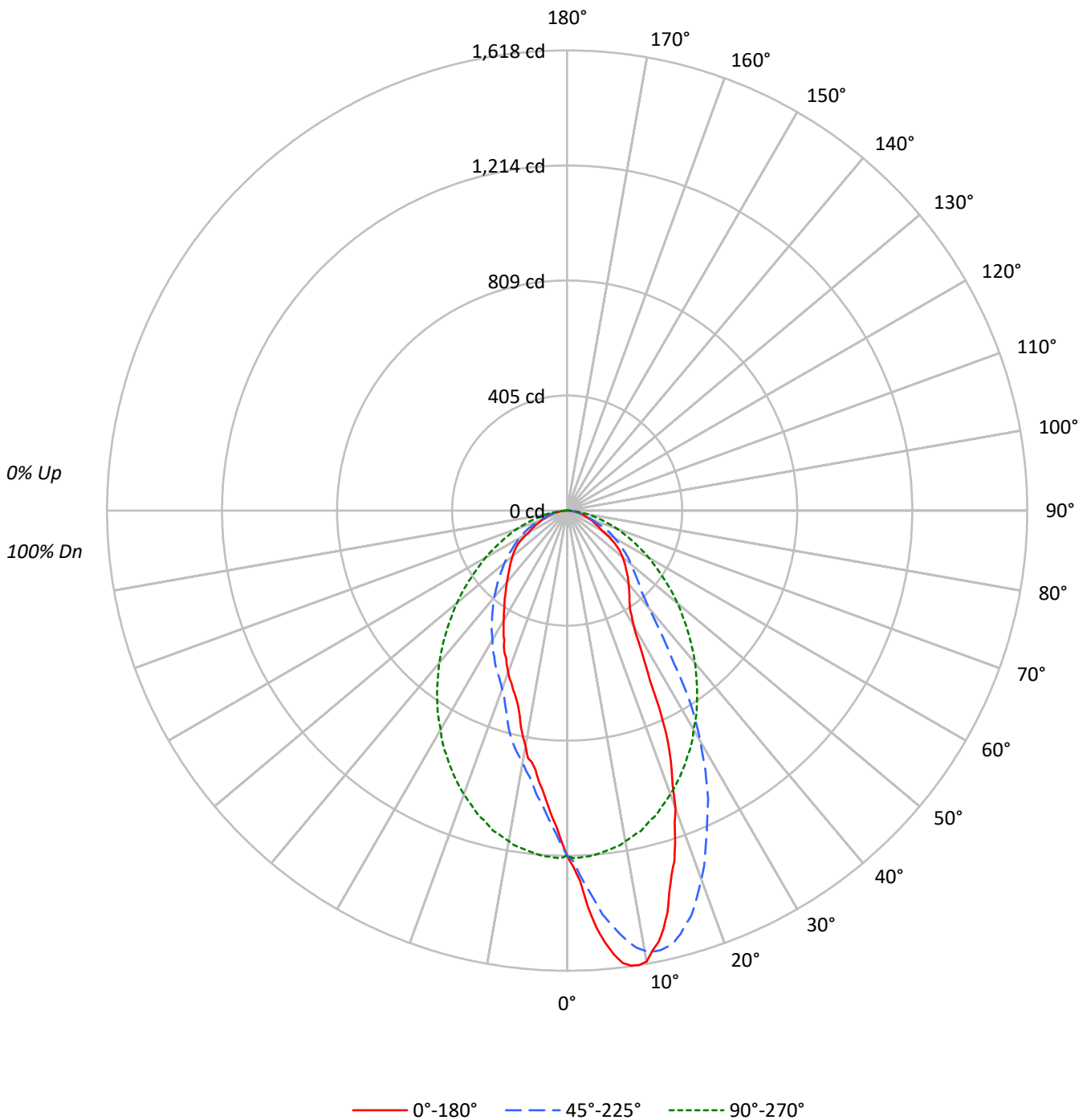
Lumens per Lamp: N/A
Luminaire Lumens: 2078.0 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (A_{in}): 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

TEST NUMBER: P735918

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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



TEST NUMBER: P735918

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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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CATALOG NUMBER: S122RDRP-S485D840-X4F0-XX-UDD-W-W

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



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	17.38	18.84	17.74	19.16	19.47	20.07	21.54	20.44	21.85	22.17
	3H	18.49	19.81	18.87	20.13	20.50	21.51	22.83	21.89	23.15	23.52
	4H	18.94	20.17	19.34	20.52	20.90	22.01	23.24	22.41	23.59	23.97
	6H	19.28	20.41	19.69	20.78	21.17	22.34	23.48	22.75	23.84	24.24
	8H	19.39	20.47	19.82	20.86	21.27	22.43	23.51	22.86	23.90	24.30
	12H	19.47	20.50	19.90	20.88	21.31	22.48	23.51	22.91	23.89	24.32
4H	2H	18.55	19.78	18.95	20.13	20.51	20.52	21.75	20.92	22.10	22.48
	3H	19.77	20.79	20.18	21.19	21.59	22.18	23.20	22.59	23.60	24.00
	4H	20.25	21.17	20.69	21.59	22.02	22.82	23.74	23.25	24.15	24.59
	6H	20.65	21.45	21.11	21.89	22.35	23.27	24.07	23.73	24.51	24.97
	8H	20.79	21.53	21.25	21.98	22.45	23.40	24.15	23.87	24.59	25.06
	12H	20.89	21.55	21.37	22.03	22.50	23.48	24.14	23.97	24.62	25.10
8H	4H	20.65	21.40	21.12	21.84	22.31	22.93	23.68	23.40	24.12	24.59
	6H	21.15	21.76	21.64	22.25	22.73	23.49	24.11	23.99	24.60	25.08
	8H	21.33	21.88	21.85	22.40	22.88	23.69	24.24	24.21	24.75	25.24
	12H	21.49	21.98	22.00	22.47	23.04	23.84	24.33	24.35	24.82	25.39
12H	4H	20.70	21.36	21.18	21.84	22.31	22.92	23.58	23.40	24.06	24.54
	6H	21.21	21.76	21.73	22.28	22.77	23.49	24.04	24.01	24.55	25.04
	8H	21.46	21.94	21.97	22.43	23.00	23.74	24.22	24.25	24.71	25.28