

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: P735871

Luminaire Tested: S122DRP-S485D830-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735871
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: S122DRP-S485D830-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

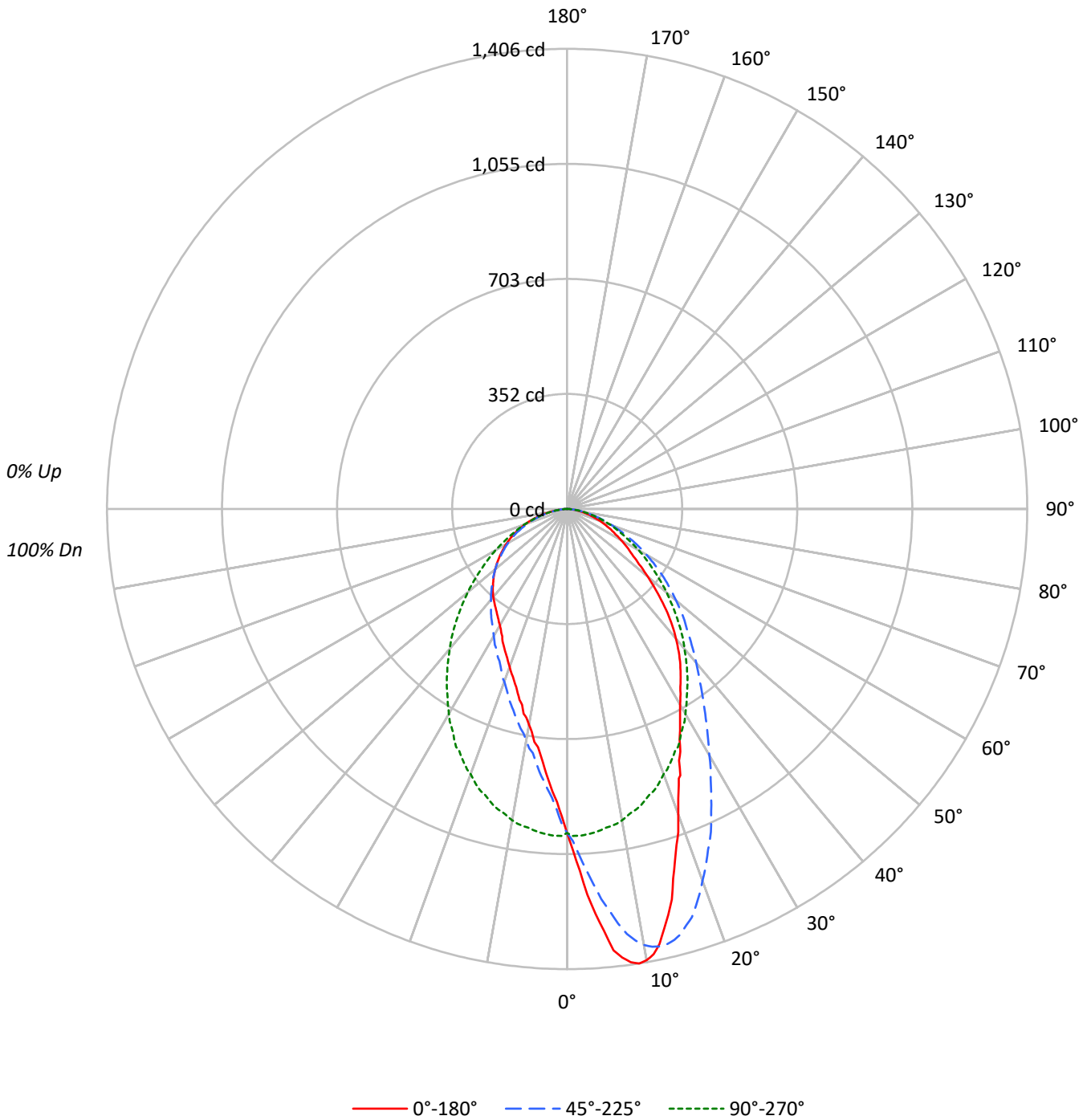
Lumens per Lamp: N/A
Luminaire Lumens: 2015.0 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (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

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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					86			
2	101	94	87	82	98	92	86	81	88	83	79	85	81	78	82	79	76	74					74			
3	93	83	76	70	91	82	75	69	79	73	68	76	71	67	74	69	66	64					64			
4	86	75	67	60	83	73	66	60	71	64	59	69	63	58	67	62	58	56					56			
5	79	67	59	53	77	66	58	53	64	57	52	62	56	52	61	55	51	49					49			
6	74	61	53	47	72	60	52	47	59	52	46	57	51	46	55	50	46	44					44			
7	69	56	48	42	67	55	47	42	54	47	42	52	46	41	51	45	41	39					39			
8	64	51	43	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35					35			
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32					32			
10	57	44	37	32	55	44	36	32	43	36	31	42	36	31	41	35	31	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	19035	19035	19035	19035	19035
5°	24965	23075	19135	16047	15312
10°	27327	26410	18850	14029	13071
15°	24584	26751	18339	12664	11593
20°	20285	24740	17640	11485	10512
25°	17336	22072	17020	10625	9743
30°	15332	19276	16042	9954	9124
35°	14182	17073	15046	9487	8865
40°	12980	15404	14004	9086	8812
45°	11433	14062	12950	8807	8696
50°	9626	12966	11866	8567	8588
55°	8096	11930	10720	8281	8438
60°	7300	10779	9734	8034	8269
65°	6627	9474	8669	7645	8109
70°	5968	8188	7806	7075	7688
75°	5206	6922	6669	6417	7025
80°	4372	5424	5424	5579	5878
85°	3308	3904	4058	4345	4212

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 20648 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.5	4.8
10°-20°	267.5	13.3
20°-30°	350.8	17.4
30°-40°	370.7	18.4
40°-50°	344.2	17.1
50°-60°	275.5	13.7
60°-70°	188.4	9.4
70°-80°	97.2	4.8
80°-90°	23.1	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°	715.7	35.5
0°-40°	1086.5	53.9
0°-60°	1706.2	84.7
0°-90°	2015.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2015.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	990	990	990	990	990	
5°	1294	1196	992	832	794	127
15°	1235	1344	922	636	583	339
25°	817	1041	802	501	459	377
35°	604	728	641	404	378	377
45°	421	517	476	324	320	323
55°	242	356	320	247	252	221
65°	146	208	191	168	178	144
75°	70	93	90	86	95	75
85°	15	18	18	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°	990.3	990.3	990.3	990.3	990.3	990.3	990.3	990.3	990.3
1°	1044.8	1039.3	1015.5	1016.9	999.2	979.4	961.1	949.5	940.0
2°	1106.0	1095.1	1057.7	1039.3	999.2	957.0	918.9	908.7	895.7
3°	1180.2	1154.4	1102.6	1059.1	997.8	936.6	884.2	865.8	863.7
4°	1240.1	1217.0	1148.2	1079.5	994.4	916.8	857.6	837.9	828.3
5°	1293.9	1278.9	1195.9	1105.4	991.7	897.8	831.7	804.5	793.6
6°	1355.8	1325.2	1234.0	1131.2	986.9	879.4	808.6	775.9	761.0
7°	1381.0	1362.0	1276.9	1148.2	980.8	858.3	779.3	743.9	733.0
8°	1398.7	1391.2	1310.9	1176.1	978.1	838.5	753.5	731.7	718.8
9°	1406.2	1400.1	1335.4	1187.7	973.3	828.3	740.5	704.5	690.2
10°	1400.1	1402.8	1353.1	1205.4	965.8	807.2	718.8	687.4	669.7
11°	1385.8	1392.6	1362.6	1225.8	956.3	790.2	699.0	667.0	650.0
12°	1358.6	1373.5	1366.7	1240.1	947.5	775.2	685.4	654.8	639.8
13°	1316.4	1349.7	1364.0	1246.3	942.0	758.2	668.4	633.0	613.9
14°	1278.2	1313.0	1356.5	1259.9	932.5	739.2	652.7	617.3	601.0
15°	1235.4	1275.5	1344.3	1263.9	921.6	723.5	636.4	597.6	582.6
16°	1175.5	1229.2	1321.8	1268.7	908.7	705.8	621.4	584.7	564.9
17°	1125.8	1183.6	1304.8	1271.4	901.8	692.2	608.5	564.9	552.0
18°	1080.2	1145.5	1274.2	1269.4	891.0	676.6	589.4	550.6	538.4
19°	1044.1	1097.2	1243.5	1264.6	876.0	661.6	575.1	540.4	526.1
20°	991.7	1053.0	1209.5	1262.6	862.4	648.0	561.5	526.1	513.9
21°	948.1	1010.8	1178.2	1255.8	852.8	635.0	551.3	512.5	501.6
22.5°	891.0	946.1	1125.8	1242.8	831.7	613.3	528.9	499.6	484.6
23°	884.2	931.1	1112.2	1238.8	825.6	608.5	521.4	492.1	479.9
24°	841.3	891.0	1080.2	1225.8	810.0	593.5	509.1	483.3	469.0
25°	817.4	858.3	1040.7	1213.6	802.5	579.9	501.0	471.7	459.4
26°	784.1	831.1	1005.3	1195.9	786.1	567.7	488.0	461.5	449.9
27°	759.6	799.1	968.6	1183.0	767.1	554.7	477.8	451.3	437.0
28°	735.8	773.9	933.2	1161.9	753.5	540.4	470.3	442.4	428.8
29°	711.3	744.6	904.6	1145.5	740.5	528.2	458.8	430.8	417.9
30°	690.8	721.5	868.5	1123.7	722.8	513.9	448.5	422.7	411.1
32.5°	643.9	669.7	795.0	1072.0	680.6	485.3	424.0	400.2	393.4
35°	604.4	621.4	727.6	1014.2	641.2	454.7	404.3	381.2	377.8
37.5°	562.9	579.2	666.3	953.6	599.6	426.8	381.8	366.9	364.1
40°	517.3	539.1	613.9	893.7	558.1	399.5	362.1	350.5	351.2
42.5°	471.7	496.9	562.9	823.6	519.3	373.7	343.0	334.9	336.2
45°	420.6	452.6	517.3	759.6	476.4	349.2	324.0	319.9	319.9
47.5°	367.5	408.4	477.8	693.6	435.6	324.7	305.6	302.9	304.2
50°	321.9	358.7	433.6	629.6	396.8	302.2	286.5	285.9	287.2
52.5°	277.0	313.8	394.8	569.7	357.3	281.8	268.2	268.2	269.5
55°	241.6	270.2	356.0	507.1	319.9	258.0	247.1	249.1	251.8
57.5°	217.1	236.2	317.9	447.2	285.2	234.8	228.0	229.4	232.8
60°	189.9	204.9	280.4	392.0	253.2	212.4	209.0	211.7	215.1
62.5°	165.4	178.3	245.0	342.4	218.5	190.6	189.2	193.3	196.7
65°	145.7	154.5	208.3	292.0	190.6	168.8	168.1	174.2	178.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	125.2	132.0	176.3	244.3	162.7	147.0	147.0	153.8	157.2
70°	106.2	111.6	145.7	201.5	138.9	125.2	125.9	134.1	136.8
72.5°	86.4	91.2	118.4	162.0	112.3	104.8	106.9	113.7	116.4
75°	70.1	73.5	93.2	128.0	89.8	83.7	86.4	92.6	94.6
77.5°	53.8	56.5	68.7	93.9	68.7	65.3	68.1	73.5	73.5
80°	39.5	40.2	49.0	66.0	49.0	47.0	50.4	53.1	53.1
82.5°	25.9	27.2	32.0	42.2	32.7	32.0	33.4	35.4	35.4
85°	15.0	15.7	17.7	23.1	18.4	18.4	19.7	19.7	19.1
87.5°	6.1	6.8	7.5	8.8	8.2	8.8	8.8	7.5	8.2
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	19.46	20.98	19.82	21.29	21.61	19.03	20.55	19.40	20.87	21.18
	3H	20.66	22.02	21.04	22.35	22.71	20.54	21.91	20.92	22.24	22.60
	4H	21.06	22.34	21.46	22.69	23.06	21.07	22.35	21.47	22.70	23.08
	6H	21.31	22.49	21.72	22.86	23.25	21.42	22.61	21.84	22.97	23.37
	8H	21.37	22.50	21.80	22.89	23.29	21.52	22.65	21.95	23.04	23.44
	12H	21.40	22.48	21.83	22.86	23.29	21.57	22.65	22.00	23.03	23.46
4H	2H	20.51	21.80	20.91	22.14	22.52	20.10	21.38	20.50	21.73	22.11
	3H	21.87	22.94	22.28	23.34	23.74	21.73	22.79	22.14	23.19	23.59
	4H	22.34	23.29	22.77	23.71	24.15	22.31	23.27	22.74	23.68	24.12
	6H	22.65	23.48	23.11	23.92	24.38	22.73	23.56	23.19	24.01	24.47
	8H	22.73	23.51	23.19	23.95	24.42	22.85	23.63	23.31	24.07	24.54
	12H	22.78	23.47	23.26	23.95	24.42	22.92	23.62	23.40	24.10	24.57
8H	4H	22.69	23.47	23.16	23.92	24.38	22.65	23.43	23.11	23.87	24.34
	6H	23.09	23.74	23.59	24.23	24.71	23.17	23.81	23.67	24.30	24.78
	8H	23.22	23.79	23.73	24.30	24.79	23.34	23.91	23.85	24.42	24.91
	12H	23.30	23.81	23.81	24.30	24.87	23.46	23.97	23.97	24.46	25.03
12H	4H	22.71	23.41	23.20	23.89	24.36	22.67	23.36	23.15	23.84	24.31
	6H	23.14	23.72	23.65	24.23	24.71	23.21	23.79	23.72	24.30	24.79
	8H	23.31	23.82	23.82	24.31	24.87	23.43	23.94	23.94	24.43	24.99