

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: P735875

Luminaire Tested: S122DRP-S485D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735875
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-S485D927-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

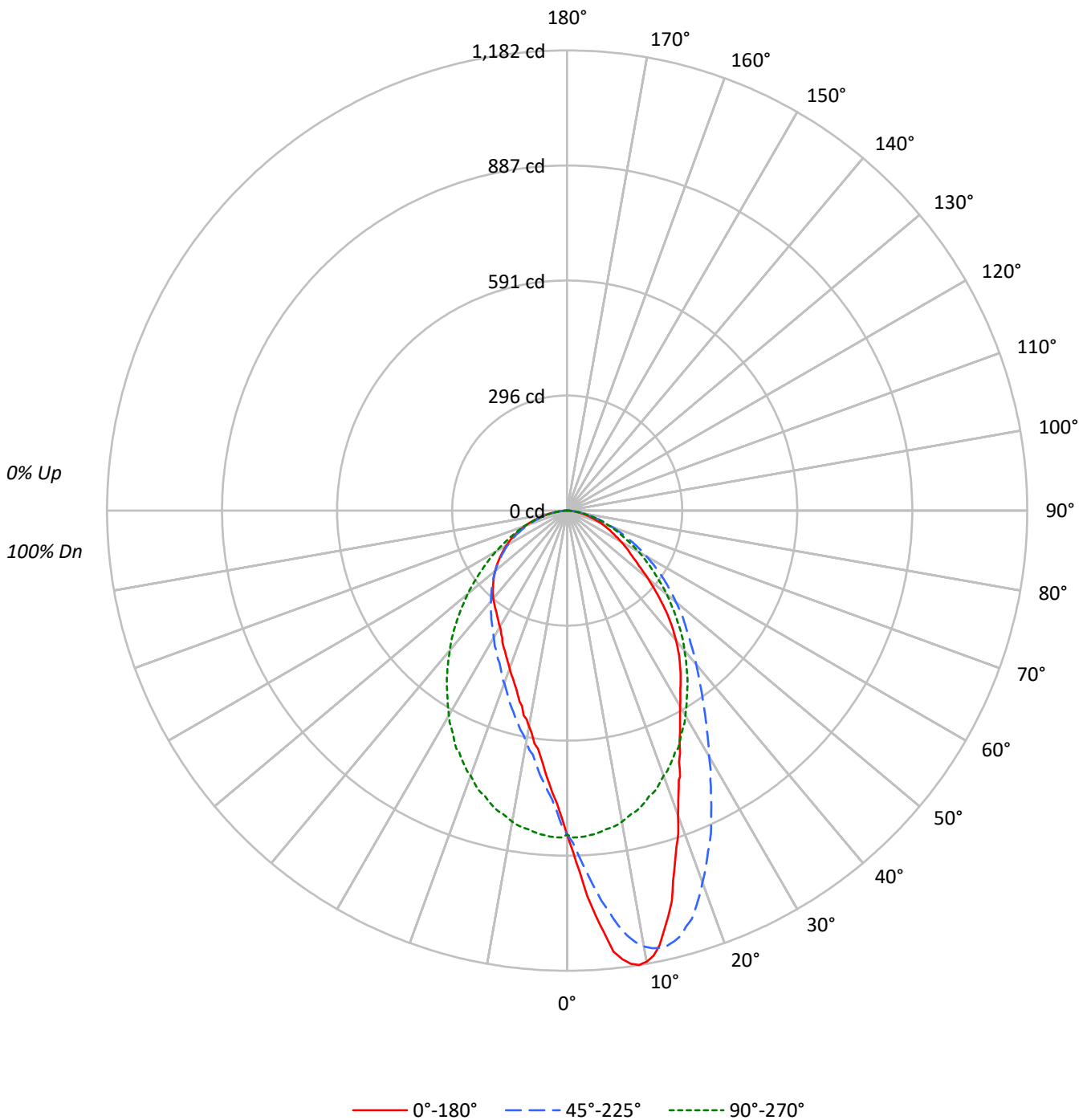
Lumens per Lamp: N/A
Luminaire Lumens: 1693.5 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 1.11 / 1.12
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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°	15998	15998	15998	15998	15998
5°	20983	19393	16082	13489	12870
10°	22967	22198	15845	11791	10987
15°	20661	22482	15414	10644	9745
20°	17049	20792	14826	9653	8834
25°	14570	18551	14305	8929	8189
30°	12886	16200	13483	8367	7668
35°	11920	14349	12645	7973	7450
40°	10910	12947	11770	7635	7407
45°	9609	11819	10884	7402	7310
50°	8092	10897	9973	7201	7219
55°	6806	10027	9011	6960	7094
60°	6135	9061	8181	6751	6950
65°	5567	7964	7286	6427	6818
70°	5013	6879	6558	5946	6463
75°	4374	5822	5607	5399	5904
80°	3675	4560	4560	4682	4937
85°	2779	3286	3396	3661	3529

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 17354 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.9	4.8
10°-20°	224.8	13.3
20°-30°	294.8	17.4
30°-40°	311.6	18.4
40°-50°	289.3	17.1
50°-60°	231.6	13.7
60°-70°	158.4	9.4
70°-80°	81.7	4.8
80°-90°	19.4	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°	601.6	35.5
0°-40°	913.2	53.9
0°-60°	1434.0	84.7
0°-90°	1693.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1693.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	832	832	832	832	832	
5°	1088	1005	834	699	667	107
15°	1038	1130	775	535	490	285
25°	687	875	674	421	386	317
35°	508	612	539	340	318	317
45°	354	435	400	272	269	272
55°	203	299	269	208	212	186
65°	122	175	160	141	150	121
75°	59	78	76	73	80	63
85°	13	15	15	17	16	15
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°	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3	832.3
1°	878.1	873.5	853.5	854.7	839.8	823.2	807.7	798.0	790.0
2°	929.6	920.4	889.0	873.5	839.8	804.3	772.3	763.7	752.8
3°	992.0	970.2	926.7	890.1	838.6	787.2	743.1	727.7	725.9
4°	1042.3	1022.8	965.1	907.3	835.8	770.6	720.8	704.2	696.2
5°	1087.5	1074.9	1005.1	929.0	833.5	754.5	699.1	676.2	667.0
6°	1139.5	1113.8	1037.1	950.8	829.5	739.1	679.6	652.1	639.6
7°	1160.7	1144.7	1073.2	965.1	824.3	721.4	655.0	625.3	616.1
8°	1175.6	1169.3	1101.8	988.5	822.0	704.8	633.3	615.0	604.1
9°	1181.9	1176.7	1122.4	998.2	818.0	696.2	622.4	592.1	580.1
10°	1176.7	1179.0	1137.3	1013.1	811.8	678.5	604.1	577.8	562.9
11°	1164.7	1170.4	1145.3	1030.3	803.7	664.2	587.5	560.6	546.3
12°	1141.8	1154.4	1148.7	1042.3	796.3	651.6	576.1	550.3	537.7
13°	1106.4	1134.4	1146.4	1047.4	791.7	637.3	561.8	532.0	516.0
14°	1074.3	1103.5	1140.1	1058.9	783.7	621.3	548.6	518.9	505.1
15°	1038.3	1072.0	1129.8	1062.3	774.6	608.1	534.9	502.3	489.7
16°	987.9	1033.1	1110.9	1066.3	763.7	593.2	522.3	491.4	474.8
17°	946.2	994.8	1096.6	1068.6	758.0	581.8	511.4	474.8	463.9
18°	907.9	962.8	1070.9	1066.9	748.8	568.6	495.4	462.8	452.5
19°	877.5	922.2	1045.2	1062.9	736.2	556.0	483.4	454.2	442.2
20°	833.5	885.0	1016.5	1061.2	724.8	544.6	471.9	442.2	431.9
21°	796.9	849.5	990.2	1055.4	716.8	533.7	463.4	430.8	421.6
22.5°	748.8	795.2	946.2	1044.6	699.1	515.4	444.5	419.9	407.3
23°	743.1	782.6	934.7	1041.1	693.9	511.4	438.2	413.6	403.3
24°	707.1	748.8	907.9	1030.3	680.8	498.8	427.9	406.2	394.1
25°	687.0	721.4	874.7	1020.0	674.5	487.4	421.0	396.4	386.1
26°	659.0	698.5	844.9	1005.1	660.7	477.1	410.2	387.9	378.1
27°	638.4	671.6	814.0	994.2	644.7	466.2	401.6	379.3	367.3
28°	618.4	650.4	784.3	976.5	633.3	454.2	395.3	371.8	360.4
29°	597.8	625.8	760.3	962.8	622.4	443.9	385.6	362.1	351.2
30°	580.6	606.4	729.9	944.5	607.5	431.9	377.0	355.2	345.5
32.5°	541.2	562.9	668.2	901.0	572.1	407.9	356.4	336.4	330.7
35°	508.0	522.3	611.5	852.4	538.9	382.1	339.8	320.4	317.5
37.5°	473.1	486.8	560.0	801.5	504.0	358.7	320.9	308.3	306.1
40°	434.8	453.1	516.0	751.1	469.1	335.8	304.3	294.6	295.2
42.5°	396.4	417.6	473.1	692.2	436.5	314.1	288.3	281.5	282.6
45°	353.5	380.4	434.8	638.4	400.4	293.5	272.3	268.9	268.9
47.5°	308.9	343.2	401.6	582.9	366.1	272.9	256.9	254.6	255.7
50°	270.6	301.5	364.4	529.2	333.5	254.0	240.8	240.3	241.4
52.5°	232.8	263.7	331.8	478.8	300.3	236.8	225.4	225.4	226.5
55°	203.1	227.1	299.2	426.2	268.9	216.8	207.7	209.4	211.7
57.5°	182.5	198.5	267.2	375.8	239.7	197.4	191.6	192.8	195.6
60°	159.6	172.2	235.7	329.5	212.8	178.5	175.6	177.9	180.8
62.5°	139.0	149.9	205.9	287.7	183.6	160.2	159.0	162.5	165.3
65°	122.4	129.9	175.1	245.4	160.2	141.9	141.3	146.4	149.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	105.3	111.0	148.2	205.4	136.7	123.6	123.6	129.3	132.1
70°	89.2	93.8	122.4	169.3	116.7	105.3	105.8	112.7	115.0
72.5°	72.7	76.7	99.5	136.2	94.4	88.1	89.8	95.5	97.8
75°	58.9	61.8	78.4	107.5	75.5	70.4	72.7	77.8	79.5
77.5°	45.2	47.5	57.8	78.9	57.8	54.9	57.2	61.8	61.8
80°	33.2	33.8	41.2	55.5	41.2	39.5	42.3	44.6	44.6
82.5°	21.7	22.9	26.9	35.5	27.5	26.9	28.0	29.7	29.7
85°	12.6	13.2	14.9	19.5	15.4	15.4	16.6	16.6	16.0
87.5°	5.1	5.7	6.3	7.4	6.9	7.4	7.4	6.3	6.9
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	18.85	20.37	19.22	20.69	21.00	18.43	19.95	18.79	20.26	20.58
	3H	20.05	21.42	20.43	21.75	22.11	19.94	21.31	20.32	21.63	22.00
	4H	20.45	21.73	20.85	22.08	22.46	20.47	21.75	20.87	22.10	22.48
	6H	20.70	21.89	21.12	22.26	22.65	20.82	22.00	21.23	22.37	22.76
	8H	20.77	21.89	21.19	22.28	22.69	20.92	22.04	21.34	22.43	22.84
	12H	20.80	21.88	21.23	22.26	22.69	20.97	22.05	21.40	22.43	22.86
4H	2H	19.91	21.19	20.31	21.54	21.92	19.50	20.78	19.90	21.13	21.51
	3H	21.27	22.34	21.68	22.74	23.14	21.12	22.19	21.53	22.59	22.99
	4H	21.73	22.69	22.16	23.11	23.55	21.71	22.66	22.14	23.08	23.52
	6H	22.05	22.88	22.50	23.32	23.78	22.13	22.96	22.58	23.40	23.86
	8H	22.12	22.90	22.59	23.35	23.81	22.24	23.02	22.71	23.47	23.93
	12H	22.17	22.87	22.65	23.35	23.82	22.32	23.01	22.80	23.49	23.96
8H	4H	22.09	22.87	22.55	23.31	23.78	22.05	22.83	22.51	23.27	23.74
	6H	22.49	23.13	22.99	23.63	24.10	22.57	23.21	23.06	23.70	24.18
	8H	22.61	23.19	23.13	23.70	24.19	22.73	23.31	23.25	23.82	24.31
	12H	22.70	23.21	23.21	23.70	24.27	22.86	23.37	23.37	23.86	24.42
12H	4H	22.11	22.81	22.59	23.29	23.76	22.06	22.76	22.55	23.24	23.71
	6H	22.54	23.11	23.05	23.62	24.11	22.61	23.18	23.12	23.69	24.18
	8H	22.71	23.21	23.21	23.71	24.27	22.82	23.33	23.33	23.83	24.39