

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: P735875

Luminaire Tested: S122DR-S485D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
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: S122DR-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

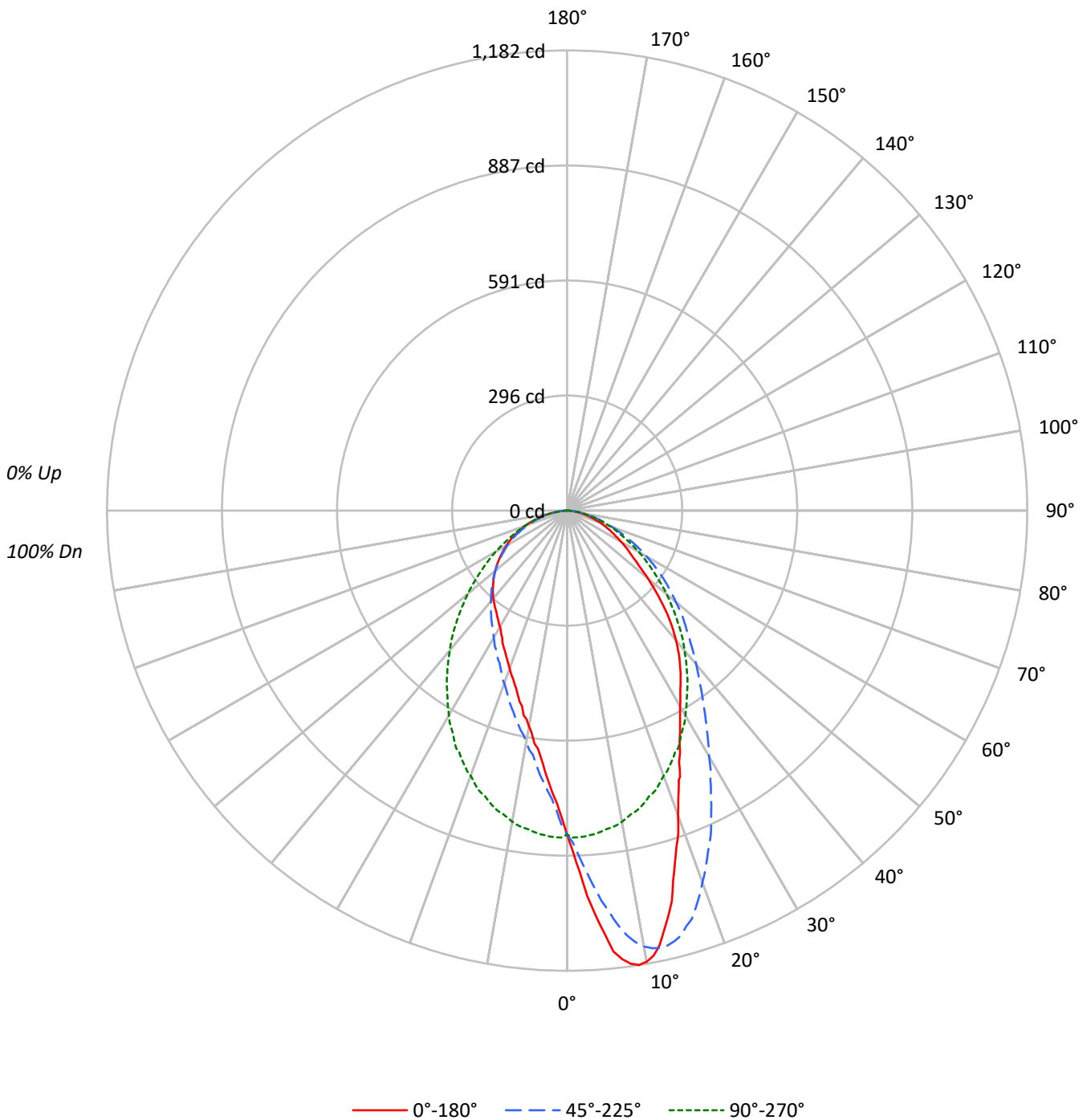
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P735875

CATALOG NUMBER: S122DR-S485D927-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735875

CATALOG NUMBER: S122DR-S485D927-X4F0-XX-UDD-W-W

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	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

TEST NUMBER: P735875

CATALOG NUMBER: S122DR-S485D927-X4F0-XX-UDD-W-W

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	



TEST NUMBER: P735875

CATALOG NUMBER: S122DR-S485D927-X4F0-XX-UDD-W-W

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



TEST NUMBER: P735875

CATALOG NUMBER: S122DR-S485D927-X4F0-XX-UDD-W-W

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

(END OF REPORT)