

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: P735877

Luminaire Tested: S122DR-S485D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735877
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-S485D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1840.7 lumens
Efficiency: N/A
Efficacy: 93.9 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

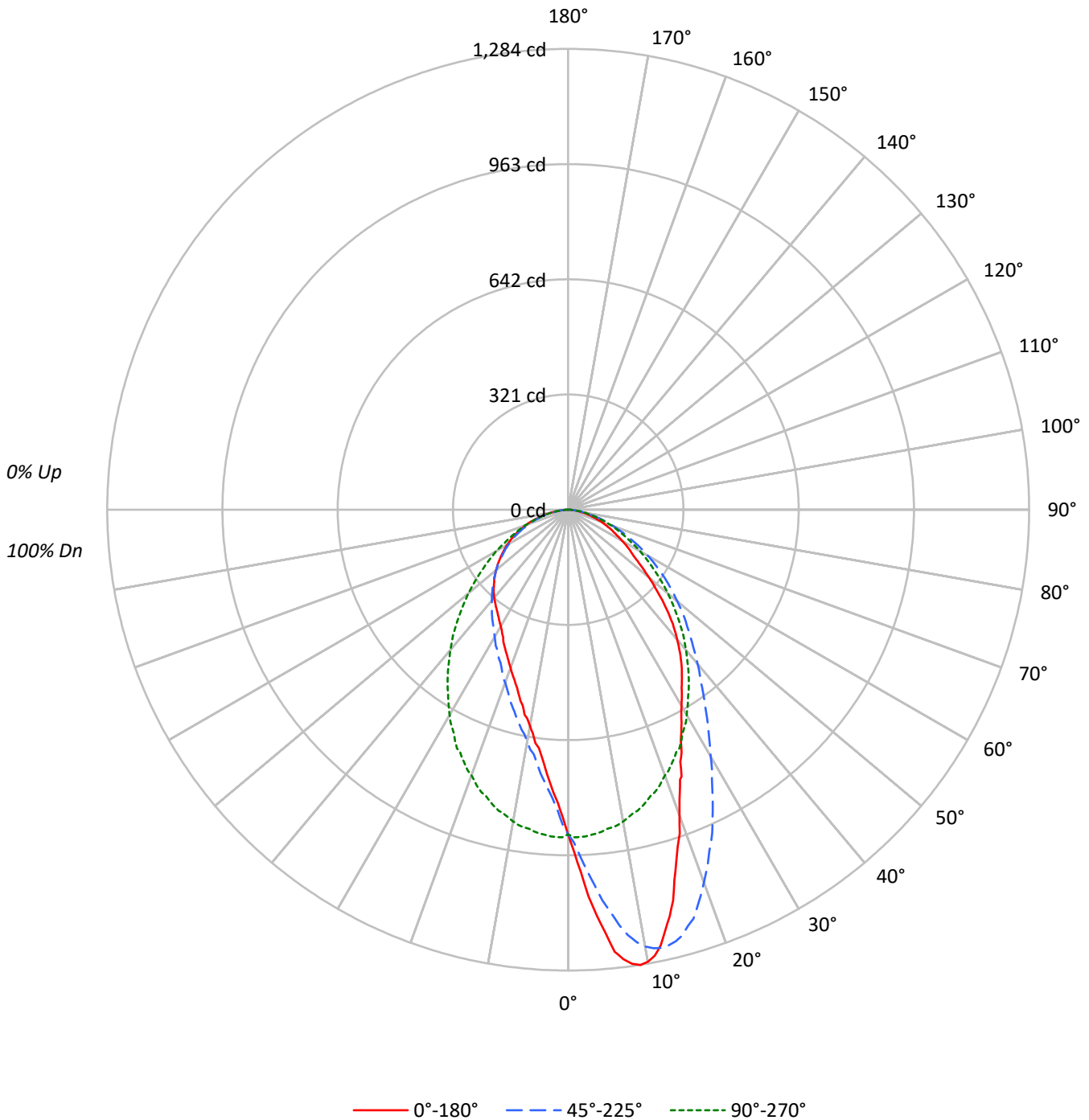
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	17389	17389	17389	17389	17389
5°	22806	21078	17479	14660	13989
10°	24961	24124	17221	12815	11941
15°	22456	24436	16753	11567	10590
20°	18530	22601	16114	10491	9602
25°	15836	20163	15546	9705	8901
30°	14007	17609	14655	9093	8334
35°	12955	15597	13743	8666	8098
40°	11856	14071	12792	8300	8049
45°	10444	12844	11830	8046	7943
50°	8794	11845	10840	7829	7847
55°	7396	10898	9792	7563	7708
60°	6670	9849	8892	7339	7554
65°	6054	8655	7918	6986	7409
70°	5451	7480	7126	6463	7025
75°	4753	6327	6097	5867	6417
80°	3996	4959	4959	5092	5369
85°	3021	3573	3705	3970	3837

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 18862 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.0	4.8
10°-20°	244.3	13.3
20°-30°	320.4	17.4
30°-40°	338.7	18.4
40°-50°	314.5	17.1
50°-60°	251.7	13.7
60°-70°	172.1	9.4
70°-80°	88.8	4.8
80°-90°	21.1	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°	653.8	35.5
0°-40°	992.5	53.9
0°-60°	1558.6	84.7
0°-90°	1840.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1840.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	905	905	905	905	905	
5°	1182	1092	906	760	725	116
15°	1128	1228	842	581	532	310
25°	747	951	733	458	420	344
35°	552	665	586	369	345	345
45°	384	472	435	296	292	295
55°	221	325	292	226	230	202
65°	133	190	174	154	163	132
75°	64	85	82	79	86	68
85°	14	16	17	18	17	17
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°	904.7	904.7	904.7	904.7	904.7	904.7	904.7	904.7	904.7
1°	954.4	949.4	927.7	928.9	912.7	894.7	877.9	867.3	858.6
2°	1010.4	1000.4	966.2	949.4	912.7	874.2	839.4	830.0	818.2
3°	1078.1	1054.5	1007.2	967.4	911.5	855.5	807.7	790.9	789.0
4°	1132.8	1111.7	1048.9	986.1	908.4	837.5	783.4	765.4	756.7
5°	1182.0	1168.3	1092.4	1009.7	905.9	820.1	759.8	734.9	725.0
6°	1238.5	1210.6	1127.2	1033.4	901.5	803.3	738.6	708.8	695.1
7°	1261.5	1244.1	1166.4	1048.9	895.9	784.0	711.9	679.6	669.6
8°	1277.7	1270.9	1197.5	1074.4	893.5	766.0	688.3	668.4	656.6
9°	1284.5	1278.9	1219.9	1085.0	889.1	756.7	676.5	643.5	630.5
10°	1278.9	1281.4	1236.0	1101.1	882.3	737.4	656.6	628.0	611.8
11°	1265.9	1272.1	1244.8	1119.8	873.6	721.9	638.5	609.3	593.8
12°	1241.0	1254.7	1248.5	1132.8	865.5	708.2	626.1	598.1	584.4
13°	1202.5	1232.9	1246.0	1138.4	860.5	692.6	610.6	578.2	560.8
14°	1167.7	1199.4	1239.2	1150.9	851.8	675.2	596.3	563.9	549.0
15°	1128.5	1165.2	1228.0	1154.6	841.9	660.9	581.3	545.9	532.2
16°	1073.8	1122.9	1207.4	1158.9	830.0	644.8	567.7	534.1	516.1
17°	1028.4	1081.2	1191.9	1161.4	823.8	632.3	555.8	516.1	504.2
18°	986.7	1046.4	1163.9	1159.6	813.9	618.0	538.4	503.0	491.8
19°	953.8	1002.3	1135.9	1155.2	800.2	604.3	525.4	493.7	480.6
20°	905.9	961.9	1104.9	1153.4	787.8	591.9	512.9	480.6	469.4
21°	866.1	923.3	1076.3	1147.1	779.1	580.1	503.6	468.2	458.2
22.5°	813.9	864.2	1028.4	1135.3	759.8	560.2	483.1	456.4	442.7
23°	807.7	850.6	1015.9	1131.6	754.2	555.8	476.3	449.5	438.3
24°	768.5	813.9	986.7	1119.8	739.9	542.2	465.1	441.4	428.4
25°	746.7	784.0	950.7	1108.6	733.0	529.7	457.6	430.9	419.7
26°	716.3	759.2	918.3	1092.4	718.1	518.5	445.8	421.5	411.0
27°	693.9	729.9	884.8	1080.6	700.7	506.7	436.5	412.2	399.2
28°	672.1	706.9	852.4	1061.3	688.3	493.7	429.6	404.1	391.7
29°	649.7	680.2	826.3	1046.4	676.5	482.5	419.1	393.6	381.8
30°	631.1	659.1	793.4	1026.5	660.3	469.4	409.7	386.1	375.5
32.5°	588.2	611.8	726.2	979.3	621.8	443.3	387.4	365.6	359.4
35°	552.1	567.7	664.7	926.4	585.7	415.3	369.3	348.2	345.1
37.5°	514.2	529.1	608.7	871.1	547.8	389.8	348.8	335.1	332.6
40°	472.5	492.4	560.8	816.4	509.8	365.0	330.8	320.2	320.8
42.5°	430.9	453.9	514.2	752.3	474.4	341.3	313.4	305.9	307.1
45°	384.2	413.5	472.5	693.9	435.2	319.0	296.0	292.2	292.2
47.5°	335.7	373.1	436.5	633.6	397.9	296.6	279.2	276.7	277.9
50°	294.1	327.7	396.1	575.1	362.5	276.1	261.8	261.1	262.4
52.5°	253.1	286.6	360.6	520.4	326.4	257.4	245.0	245.0	246.2
55°	220.7	246.8	325.2	463.2	292.2	235.6	225.7	227.6	230.0
57.5°	198.3	215.7	290.4	408.5	260.5	214.5	208.3	209.5	212.6
60°	173.5	187.1	256.2	358.1	231.3	194.0	190.9	193.4	196.5
62.5°	151.1	162.9	223.8	312.7	199.6	174.1	172.8	176.6	179.7
65°	133.1	141.1	190.3	266.7	174.1	154.2	153.6	159.2	162.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	114.4	120.6	161.0	223.2	148.6	134.3	134.3	140.5	143.6
70°	97.0	102.0	133.1	184.0	126.8	114.4	115.0	122.5	125.0
72.5°	79.0	83.3	108.2	148.0	102.6	95.8	97.6	103.8	106.3
75°	64.0	67.1	85.2	116.9	82.1	76.5	79.0	84.6	86.4
77.5°	49.1	51.6	62.8	85.8	62.8	59.7	62.2	67.1	67.1
80°	36.1	36.7	44.8	60.3	44.8	42.9	46.0	48.5	48.5
82.5°	23.6	24.9	29.2	38.5	29.8	29.2	30.5	32.3	32.3
85°	13.7	14.3	16.2	21.1	16.8	16.8	18.0	18.0	17.4
87.5°	5.6	6.2	6.8	8.1	7.5	8.1	8.1	6.8	7.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)