

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: P735921

Luminaire Tested: S122RDR-S485D930-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735921
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: S122RDR-S485D930-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1677.7 lumens
Efficiency: N/A
Efficacy: 85.6 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

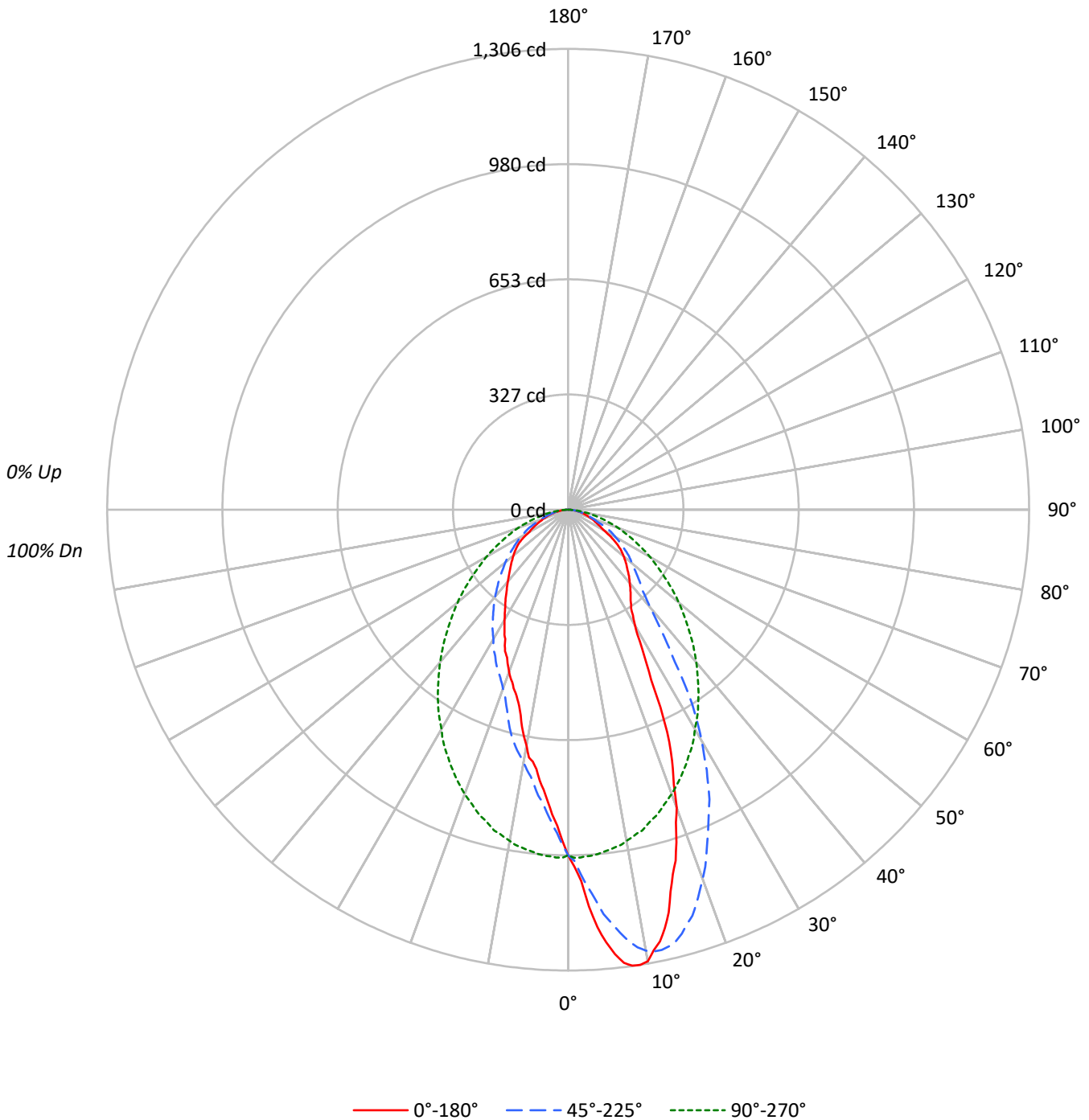
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	18820	18820	18820	18820	18820
5°	23742	22208	18891	16051	15370
10°	25361	24764	18604	14203	13272
15°	22307	24755	18112	12736	11060
20°	18389	22785	17534	11056	10009
25°	13111	20004	16831	10239	9003
30°	8390	16779	15929	9395	7997
35°	7225	12364	15100	8717	7253
40°	6810	9041	14167	8067	6662
45°	6434	7747	13170	7473	6290
50°	6127	7060	12236	6955	6055
55°	5623	6531	11186	6394	5841
60°	4436	5951	10276	5997	4932
65°	4016	5330	9319	5571	4498
70°	3704	4299	8469	4799	4136
75°	3453	3892	7389	4285	3892
80°	3188	3520	6254	3841	3520
85°	2867	3110	4808	3374	3110

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 18436 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.0	5.7
10°-20°	255.2	15.2
20°-30°	320.1	19.1
30°-40°	305.0	18.2
40°-50°	269.0	16.0
50°-60°	211.6	12.6
60°-70°	135.0	8.0
70°-80°	68.6	4.1
80°-90°	18.2	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°	670.2	39.9
0°-40°	975.1	58.1
0°-60°	1455.8	86.8
0°-90°	1677.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1677.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	979	979	979	979	979	
5°	1230	1151	979	832	797	120
15°	1121	1244	910	640	556	311
25°	618	943	794	483	424	279
35°	308	527	644	372	309	196
45°	237	285	484	275	231	183
55°	168	195	334	191	174	147
65°	88	117	205	122	99	88
75°	46	52	100	58	52	49
85°	13	14	22	15	14	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°	979.1	979.1	979.1	979.1	979.1	979.1	979.1	979.1	979.1
1°	1012.1	1016.8	995.0	997.3	986.8	967.9	949.7	951.4	938.5
2°	1052.7	1065.1	1035.0	1016.8	986.2	953.2	916.7	912.0	896.1
3°	1126.3	1120.4	1070.9	1033.9	983.8	934.4	888.4	877.8	864.3
4°	1185.8	1168.1	1107.4	1055.6	982.6	912.6	860.8	842.5	829.0
5°	1230.5	1208.1	1151.0	1072.1	979.1	900.2	831.9	811.3	796.6
6°	1266.4	1249.3	1179.3	1087.4	974.4	882.0	814.8	787.2	771.9
7°	1294.1	1280.0	1208.1	1108.0	970.3	863.7	787.8	758.9	740.7
8°	1304.7	1298.2	1234.6	1122.8	965.6	850.7	763.6	737.7	721.2
9°	1306.4	1307.0	1255.8	1136.9	961.4	827.2	746.5	720.0	711.2
10°	1299.4	1304.7	1268.8	1152.8	953.2	815.4	727.7	702.4	680.0
11°	1271.7	1295.3	1275.2	1163.4	946.1	796.6	711.2	678.2	655.9
12°	1251.1	1273.5	1275.8	1176.9	937.9	787.8	697.1	652.9	629.4
13°	1217.0	1240.5	1269.9	1180.5	933.2	766.0	679.4	627.0	598.2
14°	1176.3	1214.0	1260.5	1188.1	921.4	747.1	661.8	590.5	573.4
15°	1121.0	1174.6	1244.0	1191.0	910.2	734.2	640.0	572.3	555.8
16°	1075.1	1135.7	1221.7	1191.0	903.1	716.5	616.4	556.4	539.9
17°	1040.3	1089.8	1203.4	1191.6	891.4	704.1	592.9	541.7	528.7
18°	991.5	1046.8	1174.6	1189.3	879.0	689.4	572.9	529.3	513.4
19°	937.3	1003.2	1143.9	1185.2	868.4	674.1	551.7	516.3	502.8
20°	899.0	959.7	1113.9	1178.7	857.2	664.1	540.5	501.6	489.3
21°	834.9	909.0	1083.9	1169.9	845.5	647.0	525.2	488.7	475.1
22.5°	769.5	837.8	1028.6	1155.1	826.0	625.8	508.1	472.8	452.8
23°	744.2	820.7	1011.5	1151.0	819.5	620.5	502.8	465.7	448.0
24°	690.0	769.5	976.2	1138.1	805.4	602.9	492.8	451.6	439.2
25°	618.2	725.9	943.2	1124.5	793.6	589.9	482.8	440.4	424.5
26°	536.9	666.5	913.2	1108.0	777.2	572.3	469.2	429.8	407.4
27°	486.9	615.2	872.5	1090.4	765.4	559.3	458.1	413.9	398.0
28°	446.9	534.6	836.0	1073.3	751.3	543.4	450.4	402.7	383.9
29°	403.3	490.4	793.1	1050.3	735.9	525.2	438.0	391.5	371.5
30°	378.0	443.3	756.0	1033.3	717.7	512.8	423.3	380.3	360.3
32.5°	332.1	365.6	655.3	984.4	683.0	477.5	399.2	349.7	332.6
35°	307.9	325.6	526.9	927.3	643.5	448.0	371.5	324.4	309.1
37.5°	289.7	300.3	435.1	866.1	603.5	422.1	346.2	300.9	286.1
40°	271.4	279.7	360.3	807.2	564.6	396.8	321.5	276.7	265.5
42.5°	254.9	261.4	312.6	748.9	524.6	370.9	297.3	257.9	247.9
45°	236.7	242.6	285.0	678.2	484.5	344.4	274.9	237.3	231.4
47.5°	221.4	225.5	258.5	615.2	445.1	319.1	252.0	220.8	216.7
50°	204.9	210.2	236.1	545.2	409.2	294.4	232.6	206.1	202.5
52.5°	189.0	191.3	217.3	475.1	371.5	270.2	212.0	191.3	189.0
55°	167.8	177.2	194.9	403.3	333.8	247.9	190.8	176.0	174.3
57.5°	143.7	156.0	174.9	338.5	298.5	223.1	173.7	161.9	154.3
60°	115.4	130.1	154.8	281.4	267.3	200.8	156.0	137.8	128.3
62.5°	101.3	106.0	136.6	235.5	235.5	179.6	138.4	118.3	114.2
65°	88.3	91.8	117.2	194.9	204.9	156.0	122.5	102.4	98.9



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	77.1	80.1	89.5	162.5	176.6	136.0	101.3	89.5	85.4
70°	65.9	68.3	76.5	132.5	150.7	116.0	85.4	76.5	73.6
72.5°	55.9	58.3	63.0	99.5	123.6	96.6	71.8	65.4	63.0
75°	46.5	47.7	52.4	74.2	99.5	77.1	57.7	53.6	52.4
77.5°	37.7	38.3	41.2	53.0	77.1	58.9	46.5	43.0	42.4
80°	28.8	29.4	31.8	38.3	56.5	42.4	34.7	33.0	31.8
82.5°	20.6	21.2	22.4	25.9	38.3	28.8	24.7	24.1	22.4
85°	13.0	13.0	14.1	15.9	21.8	16.5	15.3	14.7	14.1
87.5°	5.9	5.9	6.5	6.5	10.0	7.1	7.1	6.5	5.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)