

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: P735922

Luminaire Tested: S122RDR-S485D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2019
Report Number: P735922
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-S485D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1771.7 lumens
Efficiency: N/A
Efficacy: 90.4 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

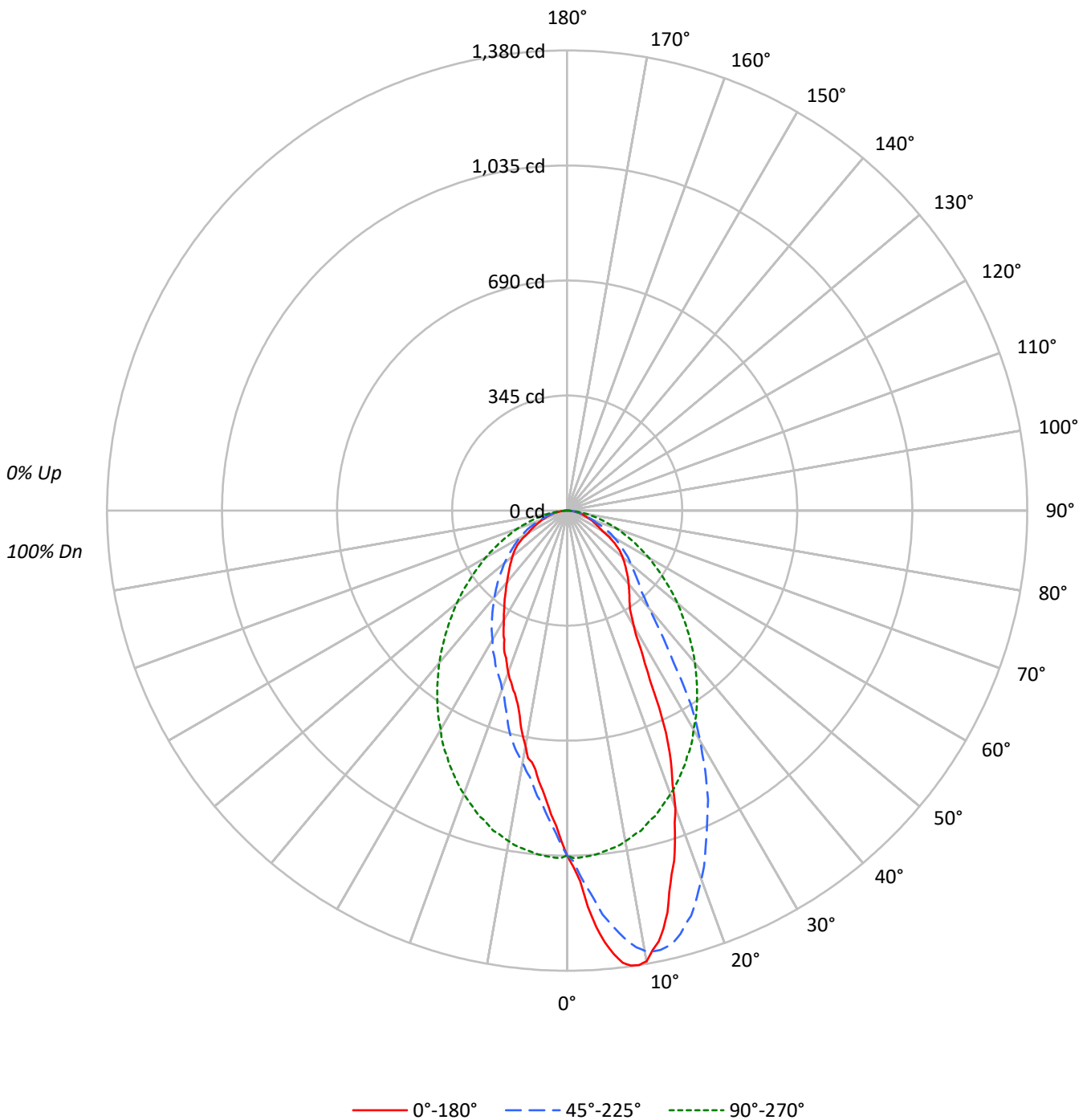
Input Watts (W): 19.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	19875	19875	19875	19875	19875
5°	25073	23453	19951	16950	16231
10°	26782	26152	19647	14999	14016
15°	23557	26144	19127	13448	11679
20°	19420	24063	18518	11676	10569
25°	13845	21126	17775	10812	9508
30°	8860	17718	16821	9921	8445
35°	7631	13058	15947	9205	7659
40°	7191	9547	14962	8519	7036
45°	6793	8179	13910	7894	6641
50°	6471	7455	12921	7344	6396
55°	5938	6897	11813	6749	6166
60°	4686	6285	10852	6335	5209
65°	4243	5626	9842	5881	4753
70°	3911	4541	8947	5069	4367
75°	3646	4107	7805	4523	4107
80°	3376	3719	6608	4062	3719
85°	3021	3286	5072	3573	3286

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 19471 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.3	5.7
10°-20°	269.5	15.2
20°-30°	338.0	19.1
30°-40°	322.0	18.2
40°-50°	284.1	16.0
50°-60°	223.5	12.6
60°-70°	142.6	8.0
70°-80°	72.5	4.1
80°-90°	19.2	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°	707.7	39.9
0°-40°	1029.8	58.1
0°-60°	1537.4	86.8
0°-90°	1771.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1771.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1034	1034	1034	1034	1034	
5°	1300	1216	1034	878	841	126
15°	1184	1314	961	676	587	328
25°	653	996	838	510	448	294
35°	325	556	680	392	326	207
45°	250	301	512	290	244	194
55°	177	206	352	201	184	156
65°	93	124	216	129	104	93
75°	49	55	105	61	55	52
85°	14	15	23	16	15	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°	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0
1°	1068.8	1073.8	1050.8	1053.3	1042.1	1022.2	1002.9	1004.8	991.1
2°	1111.7	1124.8	1093.0	1073.8	1041.4	1006.6	968.1	963.1	946.3
3°	1189.4	1183.2	1131.0	1091.8	1039.0	986.7	938.2	927.0	912.7
4°	1252.2	1233.6	1169.5	1114.8	1037.7	963.7	909.0	889.7	875.4
5°	1299.5	1275.8	1215.5	1132.2	1034.0	950.7	878.5	856.8	841.2
6°	1337.4	1319.4	1245.4	1148.4	1029.0	931.4	860.5	831.3	815.1
7°	1366.6	1351.7	1275.8	1170.1	1024.7	912.1	831.9	801.4	782.2
8°	1377.8	1371.0	1303.8	1185.7	1019.7	898.4	806.4	779.1	761.7
9°	1379.7	1380.3	1326.2	1200.6	1015.3	873.6	788.4	760.4	751.1
10°	1372.2	1377.8	1339.9	1217.4	1006.6	861.1	768.5	741.8	718.1
11°	1343.0	1367.9	1346.7	1228.6	999.2	841.2	751.1	716.3	692.6
12°	1321.2	1344.9	1347.3	1242.9	990.5	831.9	736.2	689.5	664.7
13°	1285.2	1310.0	1341.1	1246.6	985.5	808.9	717.5	662.2	631.7
14°	1242.3	1282.1	1331.2	1254.7	973.0	789.0	698.9	623.6	605.6
15°	1183.8	1240.4	1313.8	1257.8	961.2	775.3	675.8	604.3	586.9
16°	1135.3	1199.4	1290.1	1257.8	953.8	756.7	651.0	587.6	570.1
17°	1098.6	1150.9	1270.9	1258.4	941.3	743.6	626.1	572.0	558.3
18°	1047.0	1105.5	1240.4	1255.9	928.3	728.1	605.0	559.0	542.2
19°	989.8	1059.5	1208.1	1251.6	917.1	711.9	582.6	545.3	531.0
20°	949.4	1013.5	1176.4	1244.8	905.3	701.3	570.8	529.7	516.7
21°	881.6	960.0	1144.7	1235.4	892.8	683.3	554.6	516.1	501.8
22.5°	812.6	884.8	1086.2	1219.9	872.3	660.9	536.6	499.3	478.1
23°	785.9	866.7	1068.2	1215.5	865.5	655.3	531.0	491.8	473.2
24°	728.7	812.6	1030.9	1201.9	850.6	636.7	520.4	476.9	463.8
25°	652.8	766.6	996.1	1187.6	838.1	623.0	509.8	465.1	448.3
26°	567.0	703.8	964.3	1170.1	820.7	604.3	495.5	453.9	430.3
27°	514.2	649.7	921.4	1151.5	808.3	590.7	483.7	437.1	420.3
28°	471.9	564.6	882.9	1133.5	793.4	573.9	475.6	425.3	405.4
29°	425.9	517.9	837.5	1109.2	777.2	554.6	462.6	413.5	392.3
30°	399.2	468.2	798.3	1091.2	757.9	541.5	447.0	401.7	380.5
32.5°	350.7	386.1	692.0	1039.6	721.2	504.2	421.6	369.3	351.3
35°	325.2	343.8	556.5	979.3	679.6	473.2	392.3	342.6	326.4
37.5°	305.9	317.1	459.5	914.6	637.3	445.8	365.6	317.7	302.2
40°	286.6	295.3	380.5	852.4	596.3	419.1	339.5	292.2	280.4
42.5°	269.2	276.1	330.2	790.9	554.0	391.7	314.0	272.3	261.8
45°	249.9	256.2	300.9	716.3	511.7	363.7	290.4	250.6	244.3
47.5°	233.8	238.1	273.0	649.7	470.0	337.0	266.1	233.2	228.8
50°	216.4	222.0	249.3	575.7	432.1	310.9	245.6	217.6	213.9
52.5°	199.6	202.1	229.4	501.8	392.3	285.4	223.8	202.1	199.6
55°	177.2	187.1	205.8	425.9	352.5	261.8	201.4	185.9	184.0
57.5°	151.7	164.8	184.7	357.5	315.2	235.6	183.4	171.0	162.9
60°	121.9	137.4	163.5	297.2	282.3	212.0	164.8	145.5	135.5
62.5°	106.9	111.9	144.2	248.7	248.7	189.6	146.1	125.0	120.6
65°	93.3	97.0	123.7	205.8	216.4	164.8	129.3	108.2	104.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	81.4	84.6	94.5	171.6	186.5	143.6	106.9	94.5	90.2
70°	69.6	72.1	80.8	139.9	159.2	122.5	90.2	80.8	77.7
72.5°	59.1	61.6	66.5	105.1	130.6	102.0	75.9	69.0	66.5
75°	49.1	50.4	55.3	78.3	105.1	81.4	60.9	56.6	55.3
77.5°	39.8	40.4	43.5	56.0	81.4	62.2	49.1	45.4	44.8
80°	30.5	31.1	33.6	40.4	59.7	44.8	36.7	34.8	33.6
82.5°	21.8	22.4	23.6	27.4	40.4	30.5	26.1	25.5	23.6
85°	13.7	13.7	14.9	16.8	23.0	17.4	16.2	15.5	14.9
87.5°	6.2	6.2	6.8	6.8	10.6	7.5	7.5	6.8	6.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)