

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: P735913

Luminaire Tested: S122RDR-S290D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735913  
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-S290D935-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: 1067.8 lumens  
Efficiency: N/A  
Efficacy: 85.4 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

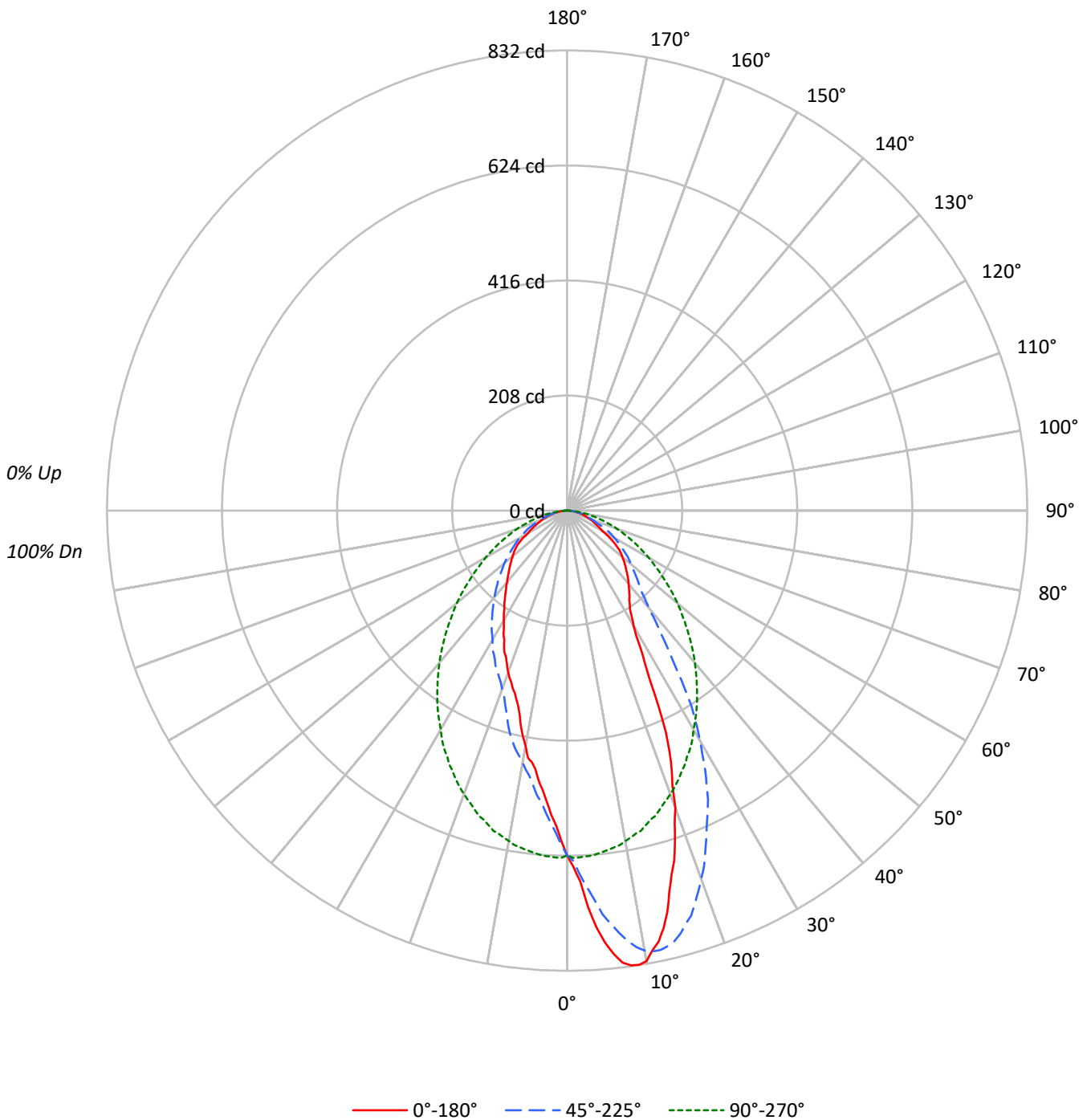
Input Watts (W): 12.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	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																												
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°	11979	11979	11979	11979	11979
5°	15112	14135	12024	10217	9782
10°	16143	15763	11841	9041	8447
15°	14198	15756	11530	8107	7040
20°	11704	14502	11160	7036	6370
25°	8345	12731	10714	6517	5730
30°	5340	10680	10139	5979	5089
35°	4599	7870	9611	5549	4616
40°	4336	5754	9018	5134	4240
45°	4094	4931	8383	4757	4004
50°	3899	4494	7790	4426	3854
55°	3579	4155	7121	4068	3716
60°	2826	3790	6539	3817	3141
65°	2556	3393	5931	3543	2865
70°	2360	2737	5390	3052	2630
75°	2198	2480	4701	2726	2480
80°	2037	2236	3985	2446	2236
85°	1808	1985	3065	2139	1985

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 11735 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.4	5.7
10°-20°	162.4	15.2
20°-30°	203.7	19.1
30°-40°	194.1	18.2
40°-50°	171.2	16.0
50°-60°	134.7	12.6
60°-70°	86.0	8.0
70°-80°	43.7	4.1
80°-90°	11.6	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°	426.6	39.9
0°-40°	620.7	58.1
0°-60°	926.6	86.8
0°-90°	1067.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1067.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	623	623	623	623	623	
5°	783	733	623	530	507	76
15°	714	792	579	407	354	198
25°	394	600	505	307	270	177
35°	196	335	410	236	197	125
45°	151	181	308	175	147	117
55°	107	124	212	121	111	94
65°	56	75	130	78	63	56
75°	30	33	63	37	33	31
85°	8	9	14	10	9	9
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°	623.2	623.2	623.2	623.2	623.2	623.2	623.2	623.2	623.2
1°	644.2	647.2	633.3	634.8	628.1	616.1	604.5	605.6	597.4
2°	670.1	677.9	658.8	647.2	627.7	606.7	583.5	580.5	570.4
3°	716.9	713.1	681.7	658.1	626.2	594.7	565.5	558.8	550.1
4°	754.7	743.5	704.9	671.9	625.5	580.9	547.9	536.3	527.6
5°	783.2	769.0	732.6	682.4	623.2	573.0	529.5	516.4	507.0
6°	806.1	795.2	750.6	692.2	620.2	561.4	518.7	501.0	491.3
7°	823.7	814.7	769.0	705.3	617.6	549.8	501.4	483.1	471.4
8°	830.4	826.3	785.9	714.6	614.6	541.5	486.1	469.6	459.1
9°	831.6	831.9	799.3	723.6	612.0	526.5	475.2	458.3	452.7
10°	827.1	830.4	807.6	733.8	606.7	519.0	463.2	447.1	432.8
11°	809.5	824.5	811.7	740.5	602.2	507.0	452.7	431.7	417.5
12°	796.3	810.6	812.1	749.1	597.0	501.4	443.7	415.6	400.6
13°	774.6	789.6	808.3	751.4	594.0	487.5	432.5	399.1	380.7
14°	748.8	772.7	802.3	756.2	586.5	475.6	421.2	375.9	365.0
15°	713.5	747.6	791.8	758.1	579.4	467.3	407.4	364.3	353.8
16°	684.3	722.9	777.6	758.1	574.9	456.1	392.4	354.1	343.6
17°	662.2	693.7	766.0	758.5	567.4	448.2	377.4	344.8	336.5
18°	631.1	666.3	747.6	757.0	559.5	438.8	364.6	336.9	326.8
19°	596.6	638.6	728.1	754.4	552.8	429.1	351.1	328.7	320.0
20°	572.2	610.8	709.0	750.2	545.6	422.7	344.0	319.3	311.4
21°	531.4	578.6	689.9	744.6	538.1	411.9	334.3	311.0	302.4
22.5°	489.8	533.3	654.7	735.3	525.8	398.4	323.4	300.9	288.2
23°	473.7	522.4	643.8	732.6	521.7	395.0	320.0	296.4	285.2
24°	439.2	489.8	621.3	724.4	512.7	383.7	313.7	287.4	279.6
25°	393.5	462.1	600.3	715.8	505.2	375.5	307.3	280.3	270.2
26°	341.8	424.2	581.2	705.3	494.7	364.3	298.7	273.6	259.3
27°	309.9	391.6	555.4	694.0	487.2	356.0	291.6	263.4	253.3
28°	284.4	340.3	532.1	683.2	478.2	345.9	286.7	256.3	244.3
29°	256.7	312.2	504.8	668.6	468.4	334.3	278.8	249.2	236.5
30°	240.6	282.2	481.2	657.7	456.8	326.4	269.4	242.1	229.3
32.5°	211.4	232.7	417.1	626.6	434.7	303.9	254.1	222.6	211.7
35°	196.0	207.2	335.4	590.2	409.6	285.2	236.5	206.5	196.7
37.5°	184.4	191.1	276.9	551.3	384.1	268.7	220.4	191.5	182.1
40°	172.8	178.0	229.3	513.8	359.4	252.6	204.6	176.1	169.0
42.5°	162.3	166.4	199.0	476.7	333.9	236.1	189.2	164.1	157.8
45°	150.6	154.4	181.4	431.7	308.4	219.2	175.0	151.0	147.3
47.5°	140.9	143.5	164.5	391.6	283.3	203.1	160.4	140.5	137.9
50°	130.4	133.8	150.3	347.0	260.5	187.4	148.0	131.2	128.9
52.5°	120.3	121.8	138.3	302.4	236.5	172.0	134.9	121.8	120.3
55°	106.8	112.8	124.0	256.7	212.5	157.8	121.4	112.1	110.9
57.5°	91.4	99.3	111.3	215.5	190.0	142.0	110.6	103.1	98.2
60°	73.5	82.8	98.6	179.1	170.1	127.8	99.3	87.7	81.7
62.5°	64.5	67.5	86.9	149.9	149.9	114.3	88.1	75.3	72.7
65°	56.2	58.5	74.6	124.0	130.4	99.3	77.9	65.2	63.0

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	49.1	51.0	57.0	103.4	112.4	86.6	64.5	57.0	54.3
70°	42.0	43.5	48.7	84.3	95.9	73.8	54.3	48.7	46.8
72.5°	35.6	37.1	40.1	63.3	78.7	61.5	45.7	41.6	40.1
75°	29.6	30.4	33.4	47.2	63.3	49.1	36.7	34.1	33.4
77.5°	24.0	24.4	26.2	33.7	49.1	37.5	29.6	27.4	27.0
80°	18.4	18.7	20.2	24.4	36.0	27.0	22.1	21.0	20.2
82.5°	13.1	13.5	14.2	16.5	24.4	18.4	15.7	15.4	14.2
85°	8.2	8.2	9.0	10.1	13.9	10.5	9.7	9.4	9.0
87.5°	3.7	3.7	4.1	4.1	6.4	4.5	4.5	4.1	3.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)