

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 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: S122RDRP-S290D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
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: S122RDRP-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

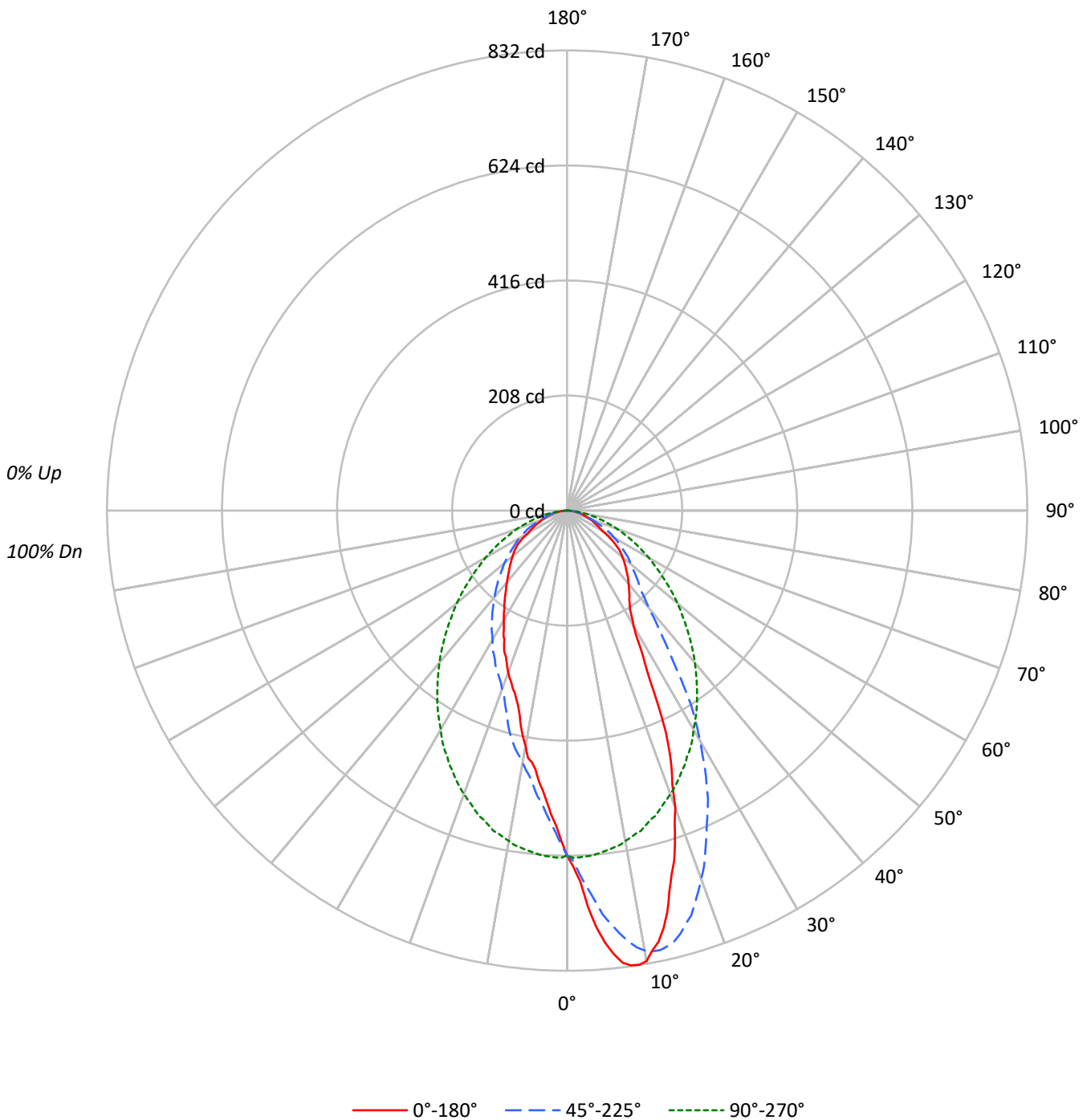
Lumens per Lamp: N/A
Luminaire Lumens: 1067.8 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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	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°	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



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.06	16.53	15.43	16.84	17.16	17.76	19.23	18.12	19.54	19.85
	3H	16.18	17.49	16.56	17.82	18.18	19.20	20.51	19.58	20.84	21.20
	4H	16.62	17.85	17.02	18.20	18.58	19.70	20.93	20.10	21.28	21.66
	6H	16.97	18.10	17.38	18.47	18.86	20.03	21.16	20.44	21.53	21.92
	8H	17.08	18.16	17.51	18.55	18.95	20.12	21.20	20.54	21.59	21.99
	12H	17.15	18.19	17.59	18.57	19.00	20.16	21.20	20.60	21.58	22.01
4H	2H	16.23	17.46	16.63	17.81	18.19	18.21	19.44	18.61	19.79	20.17
	3H	17.46	18.48	17.87	18.88	19.28	19.87	20.89	20.28	21.29	21.69
	4H	17.94	18.86	18.37	19.27	19.71	20.51	21.42	20.94	21.84	22.28
	6H	18.34	19.14	18.80	19.58	20.04	20.96	21.76	21.42	22.20	22.66
	8H	18.48	19.22	18.94	19.66	20.13	21.09	21.83	21.55	22.28	22.75
	12H	18.57	19.24	19.06	19.72	20.19	21.17	21.83	21.65	22.31	22.78
8H	4H	18.34	19.08	18.81	19.53	20.00	20.62	21.36	21.08	21.81	22.28
	6H	18.83	19.44	19.33	19.94	20.42	21.18	21.79	21.68	22.29	22.76
	8H	19.02	19.57	19.54	20.08	20.57	21.38	21.93	21.90	22.44	22.93
	12H	19.18	19.66	19.69	20.16	20.72	21.53	22.01	22.04	22.51	23.07
12H	4H	18.39	19.05	18.87	19.53	20.00	20.61	21.27	21.09	21.75	22.22
	6H	18.90	19.45	19.42	19.96	20.45	21.18	21.73	21.69	22.24	22.73
	8H	19.14	19.63	19.65	20.12	20.69	21.42	21.91	21.94	22.40	22.97