

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: P735908

Luminaire Tested: S122RDRP-S290D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735908
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-S290D835-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

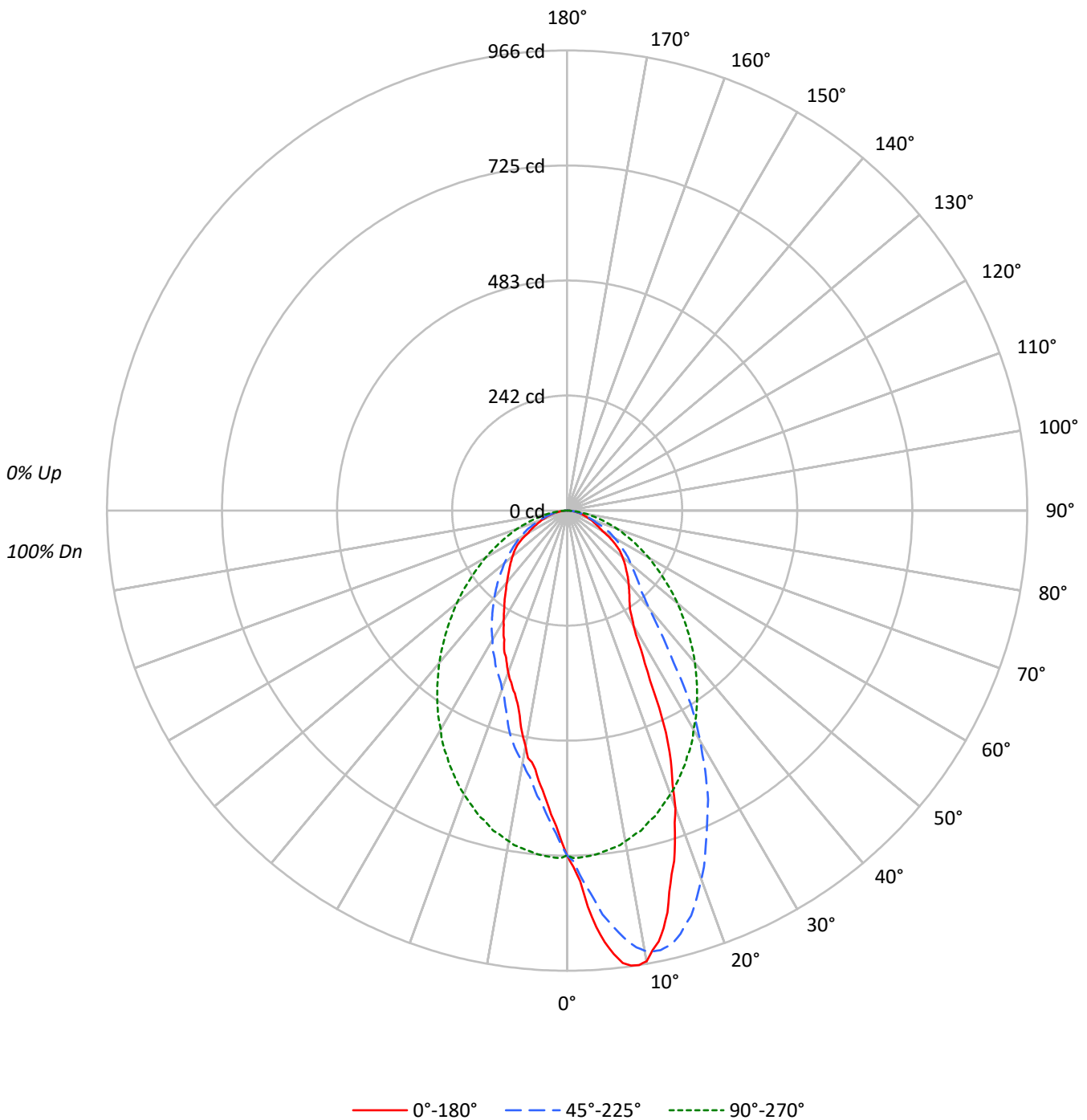
Lumens per Lamp: N/A
Luminaire Lumens: 1240.2 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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				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°	13912	13912	13912	13912	13912
5°	17552	16418	13966	11866	11363
10°	18749	18308	13754	10501	9812
15°	16491	18301	13390	9414	8177
20°	13594	16845	12962	8174	7399
25°	9692	14789	12443	7569	6655
30°	6201	12405	11777	6945	5913
35°	5341	9140	11162	6443	5362
40°	5036	6684	10473	5962	4925
45°	4757	5727	9737	5526	4651
50°	4530	5218	9046	5140	4476
55°	4155	4829	8271	4725	4316
60°	3279	4402	7596	4432	3648
65°	2970	3939	6890	4116	3325
70°	2737	3181	6261	3546	3057
75°	2555	2874	5466	3171	2874
80°	2358	2601	4627	2845	2601
85°	2117	2294	3551	2492	2294

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 13630 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.2	5.7
10°-20°	188.6	15.2
20°-30°	236.6	19.1
30°-40°	225.4	18.2
40°-50°	198.9	16.0
50°-60°	156.4	12.6
60°-70°	99.8	8.0
70°-80°	50.7	4.1
80°-90°	13.5	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°	495.4	39.9
0°-40°	720.9	58.1
0°-60°	1076.2	86.8
0°-90°	1240.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1240.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	724	724	724	724	724	
5°	910	851	724	615	589	88
15°	829	920	673	473	411	230
25°	457	697	587	357	314	206
35°	228	390	476	275	228	145
45°	175	211	358	203	171	136
55°	124	144	247	141	129	109
65°	65	87	152	90	73	65
75°	34	39	74	43	39	37
85°	10	10	16	11	10	11
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°	723.8	723.8	723.8	723.8	723.8	723.8	723.8	723.8	723.8
1°	748.2	751.7	735.6	737.3	729.5	715.6	702.1	703.4	693.8
2°	778.2	787.4	765.2	751.7	729.0	704.7	677.7	674.2	662.5
3°	832.6	828.3	791.7	764.3	727.3	690.7	656.8	649.0	638.9
4°	876.6	863.5	818.7	780.4	726.4	674.6	636.3	622.8	612.8
5°	909.7	893.1	850.9	792.6	723.8	665.5	615.0	599.8	588.9
6°	936.2	923.6	871.8	803.9	720.3	652.0	602.4	581.9	570.6
7°	956.7	946.2	893.1	819.1	717.3	638.5	582.4	561.0	547.5
8°	964.5	959.7	912.7	830.0	713.8	628.9	564.5	545.4	533.2
9°	965.8	966.3	928.4	840.5	710.8	611.5	551.9	532.3	525.8
10°	960.6	964.5	938.0	852.2	704.7	602.8	538.0	519.3	502.7
11°	940.1	957.6	942.8	860.1	699.4	588.9	525.8	501.4	484.9
12°	924.9	941.4	943.2	870.1	693.4	582.4	515.3	482.7	465.3
13°	899.7	917.1	938.8	872.7	689.9	566.3	502.3	463.5	442.2
14°	869.6	897.5	931.9	878.3	681.2	552.3	489.2	436.6	423.9
15°	828.7	868.3	919.7	880.5	672.9	542.8	473.1	423.1	410.9
16°	794.8	839.6	903.1	880.5	667.7	529.7	455.7	411.3	399.1
17°	769.1	805.6	889.7	880.9	659.0	520.6	438.3	400.4	390.9
18°	733.0	773.9	868.3	879.2	649.8	509.7	423.5	391.3	379.5
19°	692.9	741.7	845.7	876.2	642.0	498.4	407.8	381.7	371.7
20°	664.6	709.5	823.5	871.4	633.7	491.0	399.6	370.8	361.7
21°	617.2	672.0	801.3	864.8	625.0	478.3	388.2	361.3	351.2
22.5°	568.9	619.4	760.4	854.0	610.7	462.7	375.6	349.5	334.7
23°	550.2	606.7	747.8	850.9	605.9	458.8	371.7	344.3	331.2
24°	510.1	568.9	721.6	841.3	595.4	445.7	364.3	333.8	324.7
25°	457.0	536.7	697.3	831.3	586.7	436.1	356.9	325.6	313.8
26°	396.9	492.7	675.1	819.1	574.5	423.1	346.9	317.7	301.2
27°	360.0	454.8	645.0	806.1	565.8	413.5	338.6	306.0	294.2
28°	330.4	395.2	618.1	793.5	555.4	401.7	333.0	297.7	283.8
29°	298.1	362.6	586.3	776.5	544.1	388.2	323.8	289.4	274.6
30°	279.4	327.7	558.9	763.9	530.6	379.1	312.9	281.2	266.4
32.5°	245.5	270.3	484.4	727.7	504.9	353.0	295.1	258.5	245.9
35°	227.6	240.7	389.5	685.5	475.7	331.2	274.6	239.8	228.5
37.5°	214.1	222.0	321.7	640.3	446.1	312.1	255.9	222.4	211.5
40°	200.7	206.7	266.4	596.7	417.4	293.4	237.6	204.6	196.3
42.5°	188.5	193.3	231.1	553.6	387.8	274.2	219.8	190.6	183.2
45°	175.0	179.3	210.7	501.4	358.2	254.6	203.3	175.4	171.1
47.5°	163.7	166.7	191.1	454.8	329.0	235.9	186.3	163.2	160.2
50°	151.5	155.4	174.5	403.0	302.5	217.6	171.9	152.3	149.7
52.5°	139.7	141.5	160.6	351.2	274.6	199.8	156.7	141.5	139.7
55°	124.0	131.0	144.1	298.1	246.8	183.2	141.0	130.1	128.8
57.5°	106.2	115.3	129.3	250.3	220.7	165.0	128.4	119.7	114.0
60°	85.3	96.2	114.5	208.0	197.6	148.4	115.3	101.8	94.9
62.5°	74.9	78.3	101.0	174.1	174.1	132.8	102.3	87.5	84.4
65°	65.3	67.9	86.6	144.1	151.5	115.3	90.5	75.7	73.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	57.0	59.2	66.2	120.1	130.6	100.5	74.9	66.2	63.1
70°	48.7	50.5	56.6	97.9	111.4	85.7	63.1	56.6	54.4
72.5°	41.3	43.1	46.6	73.6	91.4	71.4	53.1	48.3	46.6
75°	34.4	35.3	38.7	54.8	73.6	57.0	42.7	39.6	38.7
77.5°	27.9	28.3	30.5	39.2	57.0	43.5	34.4	31.8	31.3
80°	21.3	21.8	23.5	28.3	41.8	31.3	25.7	24.4	23.5
82.5°	15.2	15.7	16.5	19.2	28.3	21.3	18.3	17.8	16.5
85°	9.6	9.6	10.4	11.8	16.1	12.2	11.3	10.9	10.4
87.5°	4.4	4.4	4.8	4.8	7.4	5.2	5.2	4.8	4.4
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	15.58	17.05	15.95	17.36	17.68	18.28	19.75	18.64	20.06	20.37
	3H	16.70	18.01	17.08	18.34	18.70	19.72	21.03	20.10	21.36	21.72
	4H	17.14	18.37	17.54	18.72	19.10	20.22	21.45	20.62	21.80	22.18
	6H	17.49	18.62	17.90	18.99	19.38	20.55	21.68	20.96	22.05	22.44
	8H	17.60	18.68	18.03	19.07	19.47	20.64	21.72	21.06	22.11	22.51
	12H	17.67	18.71	18.11	19.09	19.52	20.68	21.72	21.11	22.10	22.53
4H	2H	16.75	17.98	17.15	18.33	18.71	18.73	19.96	19.13	20.31	20.69
	3H	17.98	19.00	18.39	19.40	19.80	20.39	21.41	20.80	21.81	22.21
	4H	18.46	19.38	18.89	19.79	20.23	21.03	21.94	21.46	22.36	22.80
	6H	18.86	19.66	19.32	20.10	20.56	21.48	22.28	21.94	22.72	23.18
	8H	19.00	19.74	19.46	20.18	20.65	21.61	22.35	22.07	22.80	23.27
	12H	19.10	19.76	19.58	20.24	20.71	21.69	22.35	22.17	22.83	23.30
8H	4H	18.86	19.60	19.33	20.05	20.52	21.14	21.88	21.60	22.33	22.80
	6H	19.35	19.97	19.85	20.46	20.94	21.70	22.31	22.20	22.81	23.28
	8H	19.54	20.09	20.06	20.60	21.09	21.90	22.45	22.42	22.96	23.45
	12H	19.70	20.19	20.21	20.68	21.24	22.05	22.53	22.56	23.03	23.59
12H	4H	18.91	19.57	19.39	20.05	20.52	21.13	21.79	21.61	22.27	22.74
	6H	19.42	19.97	19.94	20.48	20.97	21.70	22.25	22.21	22.76	23.25
	8H	19.66	20.15	20.17	20.64	21.21	21.94	22.43	22.46	22.92	23.49