

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: P1055188

Luminaire Tested: S122R3DR-S290D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055188  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S290D935-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

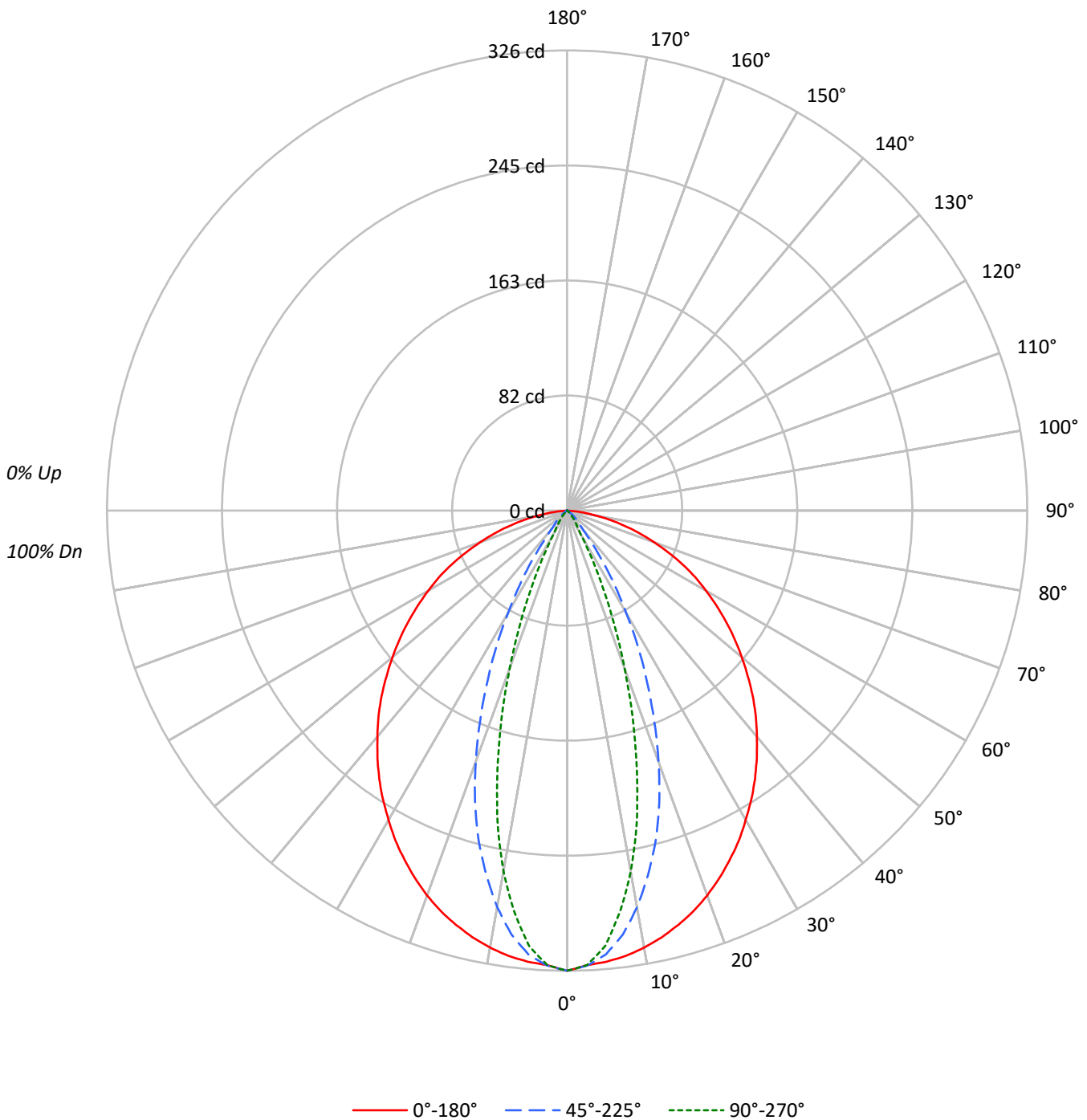
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 296.6 lumens  
Efficiency: N/A  
Efficacy: 23.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6176	6176	6176
5°	6101	6000	5888
10°	6048	5487	4996
15°	5961	4749	3742
20°	5849	3817	2395
25°	5703	2797	1229
30°	5535	1829	403
35°	5366	1013	234
40°	5171	408	129
45°	4981	271	51
50°	4760	153	21
55°	4542	73	13
60°	4304	27	0
65°	4048	18	0
70°	3634	22	0
75°	3126	29	0
80°	2368	0	0
85°	978	87	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4981 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.2	9.9
10°-20°	67.9	22.9
20°-30°	69.0	23.2
30°-40°	51.7	17.4
40°-50°	36.2	12.2
50°-60°	22.2	7.5
60°-70°	13.2	4.5
70°-80°	6.1	2.1
80°-90°	1.1	0.4
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°	166.1	56.0
0°-40°	217.8	73.4
0°-60°	276.2	93.1
0°-90°	296.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	296.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	326	326	326	326	326	
5°	321	324	316	310	310	30
15°	304	287	242	205	191	86
25°	273	225	134	76	59	126
35°	232	151	44	13	10	145
45°	186	80	10	3	2	143
55°	138	24	2	1	0	123
65°	90	7	0	0	0	89
75°	43	1	0	0	0	45
85°	4	0	0	0	0	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	326.0	326.0	326.0	326.0	326.0
2.5°	322.3	327.2	322.7	321.9	322.3
5°	320.8	323.8	315.5	309.6	309.6
7.5°	318.2	318.2	302.8	290.4	286.7
10°	314.4	310.3	285.2	265.3	259.7
12.5°	309.6	299.8	264.6	236.5	227.5
15°	303.9	287.4	242.1	205.0	190.8
17.5°	297.6	273.6	217.0	170.9	154.4
20°	290.1	258.6	189.3	136.0	118.8
22.5°	281.8	242.1	161.1	104.9	86.6
25°	272.8	224.9	133.8	76.5	58.8
27.5°	263.5	206.9	108.7	52.5	36.0
30°	253.0	188.1	83.6	31.1	18.4
32.5°	242.8	170.1	62.6	16.9	13.5
35°	232.0	151.0	43.8	13.1	10.1
37.5°	220.7	133.0	27.0	9.7	7.5
40°	209.1	114.7	16.5	7.1	5.2
42.5°	197.9	97.4	13.1	4.9	3.4
45°	185.9	79.8	10.1	3.0	1.9
47.5°	173.5	63.7	7.5	1.9	1.1
50°	161.5	49.5	5.2	1.1	0.7
52.5°	149.5	36.4	3.4	0.7	0.4
55°	137.5	24.4	2.2	0.7	0.4
57.5°	125.5	17.2	1.5	0.4	0.4
60°	113.6	13.5	0.7	0.4	0.0
62.5°	102.3	10.5	0.7	0.4	0.4
65°	90.3	7.1	0.4	0.4	0.0
67.5°	77.6	4.5	0.4	0.4	0.0
70°	65.6	2.6	0.4	0.4	0.0
72.5°	54.0	1.5	0.4	0.4	0.0
75°	42.7	0.7	0.4	0.4	0.0
77.5°	31.9	0.4	0.0	0.4	0.0
80°	21.7	0.0	0.0	0.4	0.0
82.5°	12.7	0.0	0.0	0.4	0.0
85°	4.5	0.0	0.4	0.4	0.0
87.5°	0.0	0.0	0.4	0.4	0.0
90°	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	12.53	13.79	12.90	14.10	14.42	0.00	0.00	0.00	0.00	0.00
	3H	16.28	17.40	16.66	17.73	18.09	0.00	0.00	0.00	0.00	0.00
	4H	17.59	18.63	17.99	18.98	19.36	0.00	0.00	0.00	0.00	0.00
	6H	18.44	19.40	18.86	19.77	20.17	0.00	0.00	0.00	0.00	0.00
	8H	18.66	19.56	19.09	19.95	20.36	0.00	0.00	0.00	0.00	0.00
	12H	18.72	19.58	19.15	19.97	20.40	0.00	0.00	0.00	0.00	0.00
4H	2H	12.28	13.33	12.69	13.68	14.06	0.00	0.00	0.00	0.00	0.00
	3H	16.03	16.88	16.44	17.29	17.69	0.00	0.00	0.00	0.00	0.00
	4H	17.33	18.09	17.76	18.51	18.95	0.00	0.00	0.00	0.00	0.00
	6H	18.25	18.90	18.71	19.35	19.82	0.00	0.00	0.00	0.00	0.00
	8H	18.50	19.12	18.97	19.56	20.04	0.00	0.00	0.00	0.00	0.00
	12H	18.60	19.14	19.09	19.63	20.10	0.00	0.00	0.00	0.00	0.00
8H	4H	17.18	17.79	17.65	18.24	18.71	0.00	0.00	0.00	0.00	0.00
	6H	18.08	18.58	18.59	19.08	19.56	0.00	0.00	0.00	0.00	0.00
	8H	18.34	18.78	18.86	19.30	19.79	0.00	0.00	0.00	0.00	0.00
	12H	18.46	18.85	18.97	19.34	19.92	0.00	0.00	0.00	0.00	0.00
12H	4H	17.13	17.67	17.62	18.16	18.63	0.00	0.00	0.00	0.00	0.00
	6H	18.02	18.47	18.54	18.98	19.47	0.00	0.00	0.00	0.00	0.00
	8H	18.30	18.68	18.81	19.18	19.75	0.00	0.00	0.00	0.00	0.00