

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: P1055317

Luminaire Tested: S122R3DR-H290D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055317  
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-H290D927-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

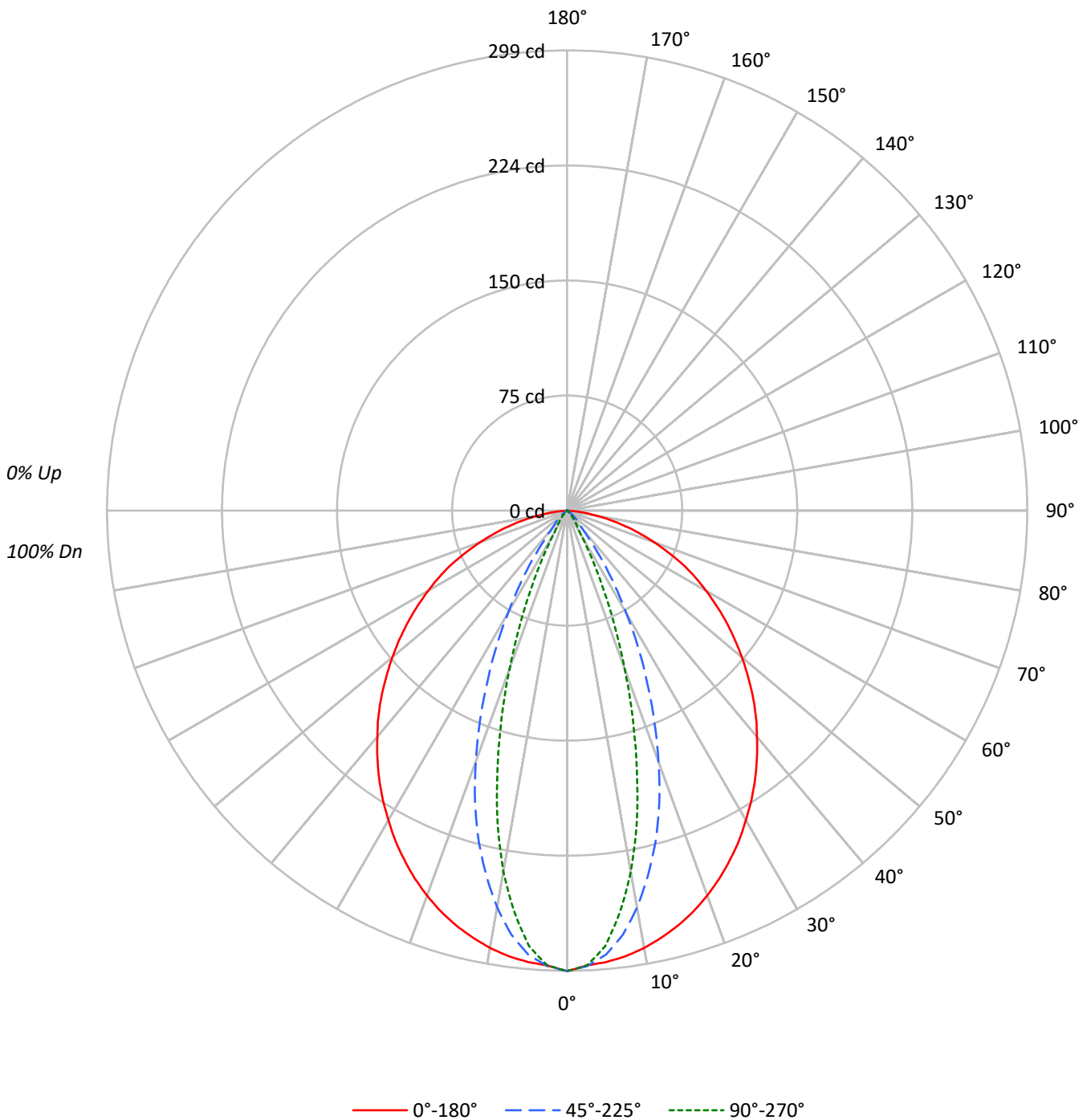
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 272.2 lumens  
Efficiency: N/A  
Efficacy: 23.3 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): 11.7  
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	67	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57
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	48	44	43

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

	0°	45°	90°
0°	5669	5669	5669
5°	5599	5508	5403
10°	5552	5037	4586
15°	5472	4358	3434
20°	5367	3502	2198
25°	5234	2567	1129
30°	5080	1678	370
35°	4924	930	215
40°	4746	373	119
45°	4571	249	46
50°	4368	141	21
55°	4169	69	10
60°	3948	27	0
65°	3716	13	0
70°	3335	17	0
75°	2869	22	0
80°	2171	0	0
85°	891	65	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4571 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	26.8	9.9
10°-20°	62.3	22.9
20°-30°	63.3	23.3
30°-40°	47.5	17.4
40°-50°	33.3	12.2
50°-60°	20.3	7.5
60°-70°	12.1	4.4
70°-80°	5.6	2.0
80°-90°	1.0	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°	152.4	56.0
0°-40°	199.9	73.5
0°-60°	253.5	93.1
0°-90°	272.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	272.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	299	299	299	299	299	
5°	294	297	290	284	284	28
15°	279	264	222	188	175	79
25°	250	206	123	70	54	115
35°	213	139	40	12	9	133
45°	171	73	9	3	2	131
55°	126	22	2	1	0	113
65°	83	6	0	0	0	82
75°	39	1	0	0	0	42
85°	4	0	0	0	0	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	299.2	299.2	299.2	299.2	299.2
2.5°	295.8	300.3	296.2	295.5	295.8
5°	294.4	297.2	289.6	284.1	284.1
7.5°	292.0	292.0	277.9	266.6	263.1
10°	288.6	284.8	261.8	243.5	238.4
12.5°	284.1	275.2	242.8	217.0	208.8
15°	279.0	263.8	222.2	188.1	175.1
17.5°	273.1	251.1	199.2	156.8	141.7
20°	266.2	237.3	173.7	124.9	109.0
22.5°	258.7	222.2	147.9	96.3	79.5
25°	250.4	206.4	122.8	70.2	54.0
27.5°	241.8	189.9	99.7	48.2	33.0
30°	232.2	172.7	76.7	28.5	16.9
32.5°	222.9	156.2	57.4	15.5	12.4
35°	212.9	138.6	40.2	12.0	9.3
37.5°	202.6	122.1	24.8	8.9	6.9
40°	191.9	105.3	15.1	6.5	4.8
42.5°	181.6	89.4	12.0	4.5	3.1
45°	170.6	73.3	9.3	2.8	1.7
47.5°	159.3	58.5	6.9	1.7	1.0
50°	148.2	45.4	4.8	1.0	0.7
52.5°	137.2	33.4	3.1	0.7	0.3
55°	126.2	22.4	2.1	0.7	0.3
57.5°	115.2	15.8	1.4	0.3	0.3
60°	104.2	12.4	0.7	0.3	0.0
62.5°	93.9	9.6	0.7	0.3	0.3
65°	82.9	6.5	0.3	0.3	0.0
67.5°	71.2	4.1	0.3	0.3	0.0
70°	60.2	2.4	0.3	0.3	0.0
72.5°	49.5	1.4	0.3	0.3	0.0
75°	39.2	0.7	0.3	0.3	0.0
77.5°	29.2	0.3	0.0	0.3	0.0
80°	19.9	0.0	0.0	0.3	0.0
82.5°	11.7	0.0	0.0	0.3	0.0
85°	4.1	0.0	0.3	0.3	0.0
87.5°	0.0	0.0	0.3	0.3	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	12.24	13.50	12.60	13.81	14.12	0.00	0.00	0.00	0.00	0.00
	3H	15.98	17.10	16.36	17.43	17.79	0.00	0.00	0.00	0.00	0.00
	4H	17.29	18.33	17.69	18.68	19.07	0.00	0.00	0.00	0.00	0.00
	6H	18.14	19.10	18.56	19.47	19.86	0.00	0.00	0.00	0.00	0.00
	8H	18.36	19.26	18.79	19.65	20.06	0.00	0.00	0.00	0.00	0.00
	12H	18.42	19.28	18.85	19.67	20.10	0.00	0.00	0.00	0.00	0.00
4H	2H	11.99	13.03	12.39	13.38	13.77	0.00	0.00	0.00	0.00	0.00
	3H	15.73	16.59	16.15	16.99	17.39	0.00	0.00	0.00	0.00	0.00
	4H	17.03	17.79	17.47	18.21	18.66	0.00	0.00	0.00	0.00	0.00
	6H	17.95	18.60	18.41	19.05	19.52	0.00	0.00	0.00	0.00	0.00
	8H	18.20	18.82	18.67	19.26	19.74	0.00	0.00	0.00	0.00	0.00
	12H	18.31	18.84	18.79	19.33	19.80	0.00	0.00	0.00	0.00	0.00
8H	4H	16.88	17.50	17.36	17.94	18.42	0.00	0.00	0.00	0.00	0.00
	6H	17.78	18.28	18.29	18.78	19.26	0.00	0.00	0.00	0.00	0.00
	8H	18.04	18.48	18.56	19.00	19.49	0.00	0.00	0.00	0.00	0.00
	12H	18.16	18.55	18.67	19.04	19.62	0.00	0.00	0.00	0.00	0.00
12H	4H	16.84	17.37	17.32	17.86	18.33	0.00	0.00	0.00	0.00	0.00
	6H	17.72	18.16	18.24	18.68	19.17	0.00	0.00	0.00	0.00	0.00
	8H	18.00	18.38	18.51	18.88	19.45	0.00	0.00	0.00	0.00	0.00