

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: P1055344

Luminaire Tested: S122R3DR-H485D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055344  
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-H485D927-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: -

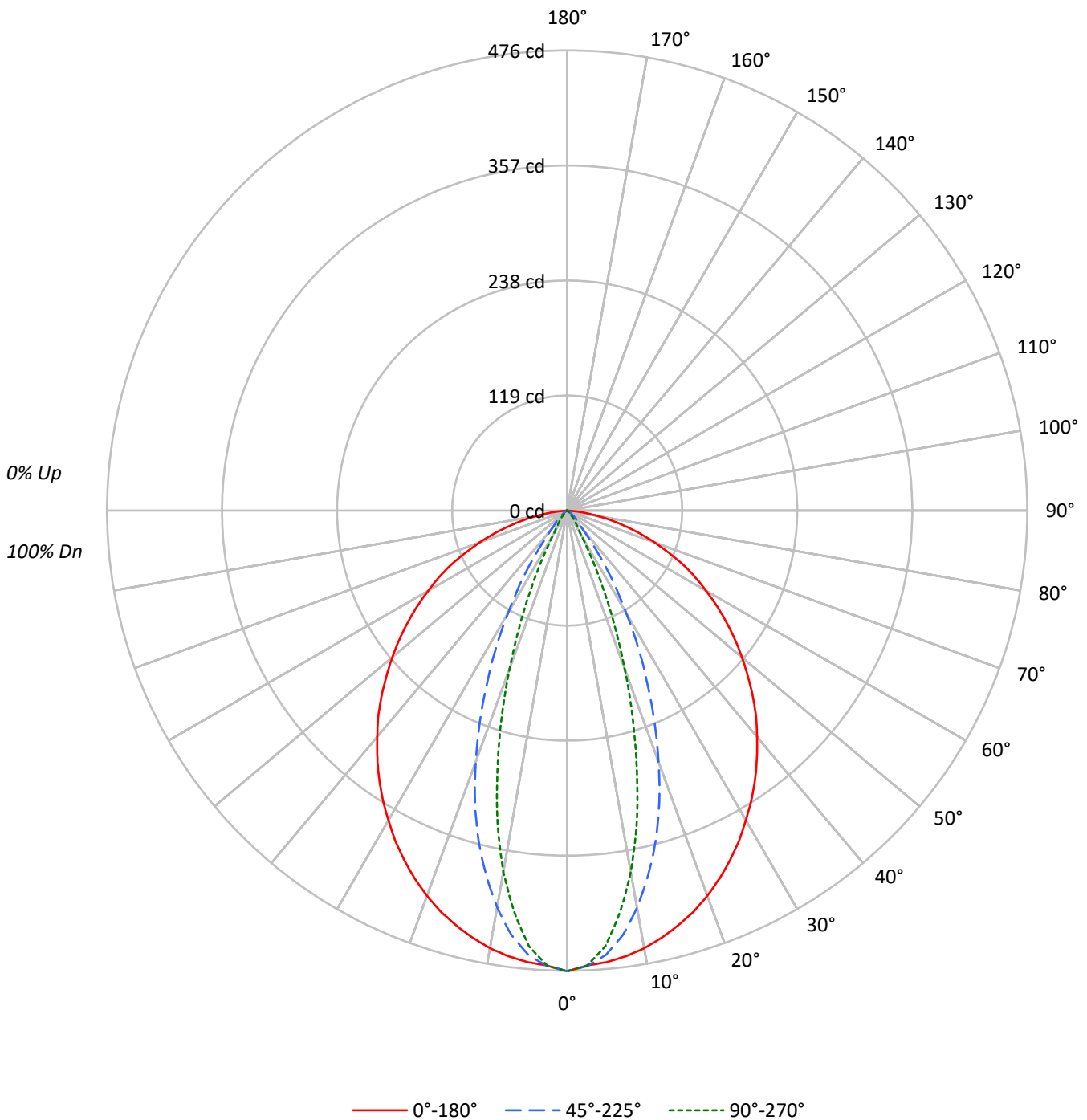
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 433.5 lumens  
Efficiency: N/A  
Efficacy: 25.1 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): 17.3  
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	67	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57					57			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44	43					43			

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

	0°	45°	90°
0°	9028	9028	9028
5°	8918	8771	8604
10°	8842	8018	7303
15°	8713	6941	5468
20°	8549	5577	3500
25°	8337	4087	1798
30°	8088	2671	586
35°	7843	1483	342
40°	7558	596	190
45°	7280	397	72
50°	6959	227	32
55°	6639	109	17
60°	6290	42	0
65°	5918	22	0
70°	5312	28	0
75°	4568	37	0
80°	3470	0	0
85°	1435	109	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7280 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.7	9.9
10°-20°	99.3	22.9
20°-30°	100.8	23.2
30°-40°	75.6	17.4
40°-50°	53.0	12.2
50°-60°	32.4	7.5
60°-70°	19.3	4.4
70°-80°	8.9	2.0
80°-90°	1.6	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°	242.8	56.0
0°-40°	318.4	73.4
0°-60°	403.7	93.1
0°-90°	433.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	433.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	469	473	461	452	452	44
15°	444	420	354	300	279	125
25°	399	329	196	112	86	184
35°	339	221	64	19	15	212
45°	272	117	15	4	3	209
55°	201	36	3	1	0	180
65°	132	10	0	0	0	130
75°	62	1	0	0	0	66
85°	7	0	0	0	0	11
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	476.5	476.5	476.5	476.5	476.5
2.5°	471.1	478.2	471.6	470.5	471.1
5°	468.9	473.3	461.2	452.4	452.4
7.5°	465.0	465.0	442.6	424.5	419.0
10°	459.6	453.5	416.8	387.8	379.6
12.5°	452.4	438.2	386.7	345.6	332.5
15°	444.2	420.1	353.9	299.6	278.8
17.5°	434.9	399.9	317.2	249.8	225.7
20°	424.0	378.0	276.6	198.8	173.6
22.5°	411.9	353.9	235.5	153.4	126.5
25°	398.8	328.7	195.5	111.7	86.0
27.5°	385.1	302.4	158.8	76.7	52.6
30°	369.7	275.0	122.1	45.5	26.8
32.5°	354.9	248.7	91.5	24.6	19.7
35°	339.1	220.7	64.1	19.2	14.8
37.5°	322.6	194.5	39.4	14.2	11.0
40°	305.6	167.6	24.1	10.4	7.7
42.5°	289.2	142.4	19.2	7.1	4.9
45°	271.7	116.7	14.8	4.4	2.7
47.5°	253.6	93.1	11.0	2.7	1.6
50°	236.1	72.3	7.7	1.6	1.1
52.5°	218.6	53.1	4.9	1.1	0.5
55°	201.0	35.6	3.3	1.1	0.5
57.5°	183.5	25.2	2.2	0.5	0.5
60°	166.0	19.7	1.1	0.5	0.0
62.5°	149.5	15.3	1.1	0.5	0.5
65°	132.0	10.4	0.5	0.5	0.0
67.5°	113.4	6.6	0.5	0.5	0.0
70°	95.9	3.8	0.5	0.5	0.0
72.5°	78.9	2.2	0.5	0.5	0.0
75°	62.4	1.1	0.5	0.5	0.0
77.5°	46.6	0.5	0.0	0.5	0.0
80°	31.8	0.0	0.0	0.5	0.0
82.5°	18.6	0.0	0.0	0.5	0.0
85°	6.6	0.0	0.5	0.5	0.0
87.5°	0.0	0.0	0.5	0.5	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	13.86	15.12	14.22	15.43	15.74	0.00	0.00	0.00	0.00	0.00
	3H	17.60	18.72	17.98	19.05	19.41	0.00	0.00	0.00	0.00	0.00
	4H	18.91	19.95	19.31	20.30	20.69	0.00	0.00	0.00	0.00	0.00
	6H	19.77	20.72	20.18	21.09	21.49	0.00	0.00	0.00	0.00	0.00
	8H	19.98	20.88	20.41	21.27	21.68	0.00	0.00	0.00	0.00	0.00
	12H	20.04	20.91	20.48	21.29	21.72	0.00	0.00	0.00	0.00	0.00
4H	2H	13.61	14.65	14.01	15.00	15.39	0.00	0.00	0.00	0.00	0.00
	3H	17.35	18.21	17.77	18.61	19.01	0.00	0.00	0.00	0.00	0.00
	4H	18.65	19.41	19.08	19.83	20.27	0.00	0.00	0.00	0.00	0.00
	6H	19.57	20.22	20.03	20.67	21.14	0.00	0.00	0.00	0.00	0.00
	8H	19.83	20.44	20.30	20.89	21.36	0.00	0.00	0.00	0.00	0.00
	12H	19.93	20.47	20.42	20.95	21.43	0.00	0.00	0.00	0.00	0.00
8H	4H	18.50	19.12	18.97	19.56	20.03	0.00	0.00	0.00	0.00	0.00
	6H	19.41	19.90	19.91	20.40	20.88	0.00	0.00	0.00	0.00	0.00
	8H	19.66	20.11	20.19	20.62	21.12	0.00	0.00	0.00	0.00	0.00
	12H	19.78	20.17	20.30	20.67	21.24	0.00	0.00	0.00	0.00	0.00
12H	4H	18.45	18.99	18.94	19.48	19.95	0.00	0.00	0.00	0.00	0.00
	6H	19.34	19.79	19.87	20.30	20.80	0.00	0.00	0.00	0.00	0.00
	8H	19.62	20.01	20.13	20.50	21.08	0.00	0.00	0.00	0.00	0.00