

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: P1055347

Luminaire Tested: S122R3DR-H485D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055347  
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-H485D930-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

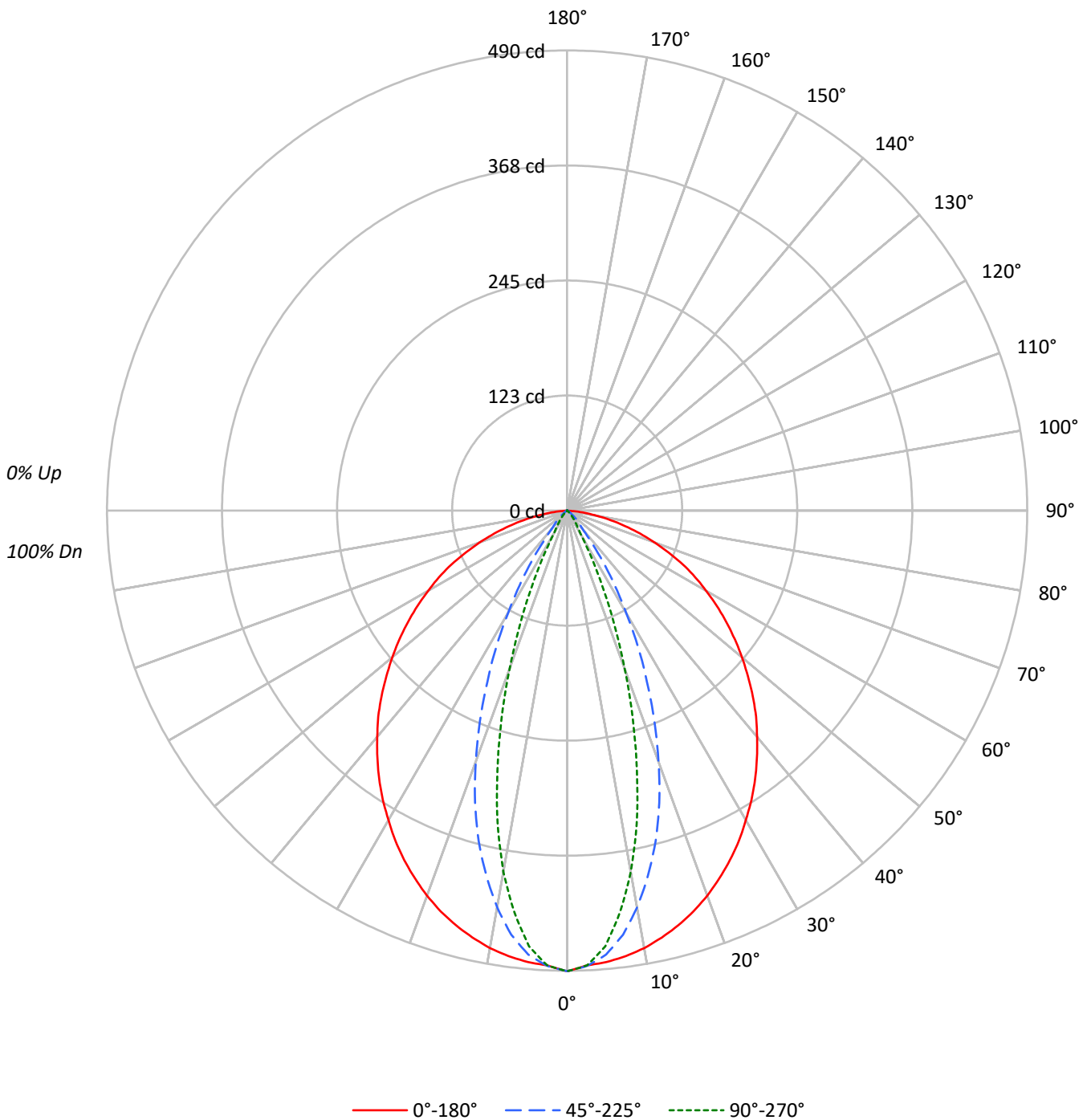
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 446.3 lumens  
Efficiency: N/A  
Efficacy: 25.8 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	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	90				90
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	66	63	61				61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56				56
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	69	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	47	44	43				43

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

	0°	45°	90°
0°	9293	9293	9293
5°	9178	9028	8857
10°	9100	8253	7516
15°	8968	7143	5627
20°	8797	5740	3603
25°	8579	4208	1850
30°	8324	2750	604
35°	8072	1526	352
40°	7781	613	195
45°	7491	407	75
50°	7162	233	32
55°	6834	112	20
60°	6472	42	0
65°	6092	27	0
70°	5467	33	0
75°	4707	44	0
80°	3568	0	0
85°	1478	130	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7491 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.0	9.9
10°-20°	102.2	22.9
20°-30°	103.7	23.2
30°-40°	77.8	17.4
40°-50°	54.5	12.2
50°-60°	33.4	7.5
60°-70°	19.9	4.5
70°-80°	9.2	2.1
80°-90°	1.7	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°	249.9	56.0
0°-40°	327.7	73.4
0°-60°	415.5	93.1
0°-90°	446.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	446.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	490	490	490	490	490	
5°	483	487	475	466	466	46
15°	457	432	364	308	287	129
25°	410	338	201	115	88	189
35°	349	227	66	20	15	218
45°	280	120	15	4	3	216
55°	207	37	3	1	1	185
65°	136	11	1	1	0	134
75°	64	1	1	1	0	68
85°	7	0	1	1	0	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	490.5	490.5	490.5	490.5	490.5
2.5°	484.8	492.1	485.4	484.3	484.8
5°	482.6	487.1	474.7	465.7	465.7
7.5°	478.6	478.6	455.5	436.9	431.3
10°	473.0	466.8	429.0	399.1	390.7
12.5°	465.7	451.0	398.0	355.7	342.2
15°	457.2	432.4	364.2	308.4	286.9
17.5°	447.6	411.5	326.4	257.1	232.3
20°	436.3	389.0	284.7	204.6	178.7
22.5°	423.9	364.2	242.4	157.8	130.2
25°	410.4	338.2	201.3	115.0	88.5
27.5°	396.3	311.2	163.5	78.9	54.1
30°	380.5	283.0	125.7	46.8	27.6
32.5°	365.3	255.9	94.1	25.4	20.3
35°	349.0	227.2	66.0	19.7	15.2
37.5°	332.0	200.1	40.6	14.7	11.3
40°	314.6	172.5	24.8	10.7	7.9
42.5°	297.7	146.6	19.7	7.3	5.1
45°	279.6	120.1	15.2	4.5	2.8
47.5°	261.0	95.8	11.3	2.8	1.7
50°	243.0	74.4	7.9	1.7	1.1
52.5°	224.9	54.7	5.1	1.1	0.6
55°	206.9	36.6	3.4	1.1	0.6
57.5°	188.9	25.9	2.3	0.6	0.6
60°	170.8	20.3	1.1	0.6	0.0
62.5°	153.9	15.8	1.1	0.6	0.6
65°	135.9	10.7	0.6	0.6	0.0
67.5°	116.7	6.8	0.6	0.6	0.0
70°	98.7	3.9	0.6	0.6	0.0
72.5°	81.2	2.3	0.6	0.6	0.0
75°	64.3	1.1	0.6	0.6	0.0
77.5°	47.9	0.6	0.0	0.6	0.0
80°	32.7	0.0	0.0	0.6	0.0
82.5°	19.2	0.0	0.0	0.6	0.0
85°	6.8	0.0	0.6	0.6	0.0
87.5°	0.0	0.0	0.6	0.6	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	13.95	15.21	14.32	15.53	15.84	0.00	0.00	0.00	0.00	0.00
	3H	17.70	18.82	18.08	19.15	19.51	0.00	0.00	0.00	0.00	0.00
	4H	19.01	20.05	19.41	20.40	20.79	0.00	0.00	0.00	0.00	0.00
	6H	19.86	20.82	20.28	21.19	21.58	0.00	0.00	0.00	0.00	0.00
	8H	20.08	20.98	20.51	21.37	21.78	0.00	0.00	0.00	0.00	0.00
	12H	20.14	21.01	20.58	21.39	21.82	0.00	0.00	0.00	0.00	0.00
4H	2H	13.71	14.75	14.11	15.10	15.48	0.00	0.00	0.00	0.00	0.00
	3H	17.45	18.30	17.86	18.71	19.11	0.00	0.00	0.00	0.00	0.00
	4H	18.75	19.51	19.18	19.93	20.37	0.00	0.00	0.00	0.00	0.00
	6H	19.67	20.32	20.13	20.77	21.24	0.00	0.00	0.00	0.00	0.00
	8H	19.93	20.54	20.40	20.99	21.46	0.00	0.00	0.00	0.00	0.00
	12H	20.03	20.57	20.52	21.05	21.53	0.00	0.00	0.00	0.00	0.00
8H	4H	18.60	19.22	19.07	19.66	20.13	0.00	0.00	0.00	0.00	0.00
	6H	19.50	20.00	20.01	20.50	20.98	0.00	0.00	0.00	0.00	0.00
	8H	19.76	20.21	20.29	20.72	21.22	0.00	0.00	0.00	0.00	0.00
	12H	19.88	20.27	20.40	20.77	21.34	0.00	0.00	0.00	0.00	0.00
12H	4H	18.55	19.09	19.04	19.58	20.05	0.00	0.00	0.00	0.00	0.00
	6H	19.44	19.88	19.96	20.40	20.89	0.00	0.00	0.00	0.00	0.00
	8H	19.72	20.11	20.23	20.60	21.18	0.00	0.00	0.00	0.00	0.00