

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: P1055348

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

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055348  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)  
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-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

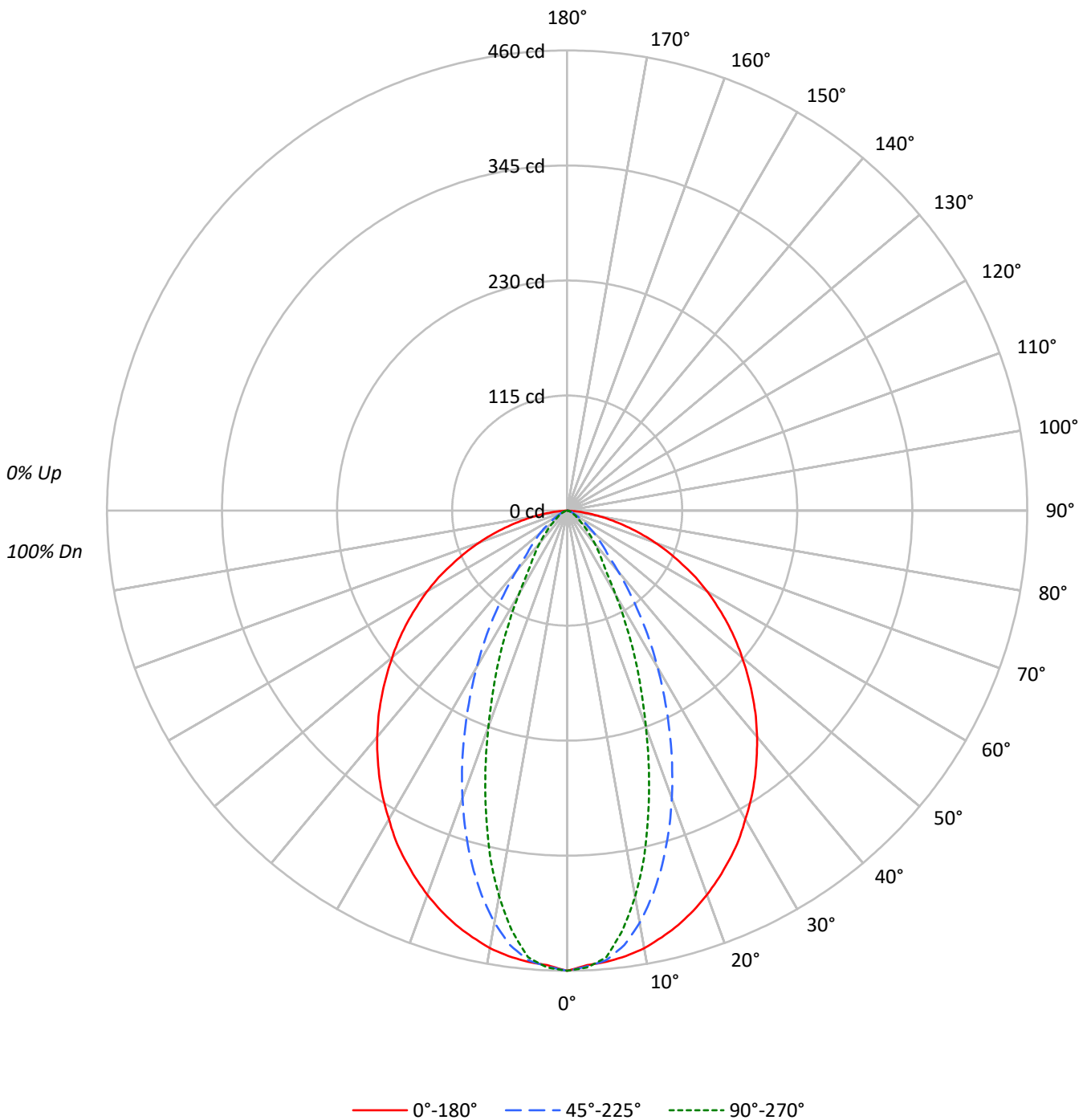
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 527.2 lumens  
Efficiency: N/A  
Efficacy: 30.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

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

	0°	45°	90°
0°	8715	8715	8715
5°	8610	8577	8524
10°	8546	8047	7537
15°	8414	7198	6147
20°	8240	6172	4637
25°	8038	5055	3311
30°	7795	3947	2109
35°	7563	2893	1409
40°	7306	1951	1059
45°	7023	1375	756
50°	6729	1046	531
55°	6444	727	390
60°	6131	493	322
65°	5684	354	251
70°	5185	283	216
75°	4495	249	168
80°	3568	185	185
85°	1956	239	130

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7023 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.1	8.0
10°-20°	103.2	19.6
20°-30°	117.9	22.4
30°-40°	100.0	19.0
40°-50°	74.6	14.2
50°-60°	48.2	9.1
60°-70°	26.9	5.1
70°-80°	11.8	2.2
80°-90°	2.5	0.5
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°	263.2	49.9
0°-40°	363.2	68.9
0°-60°	486.0	92.2
0°-90°	527.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	527.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	453	458	451	446	448	43
15°	429	418	367	328	313	121
25°	384	339	242	177	158	177
35°	327	246	125	68	61	204
45°	262	156	51	33	28	202
55°	195	74	22	14	12	174
65°	127	27	8	6	6	126
75°	61	6	3	3	2	66
85°	9	1	1	1	1	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	460.0	460.0	460.0	460.0	460.0
2.5°	454.9	461.7	456.1	456.1	457.2
5°	452.7	458.3	451.0	446.5	448.2
7.5°	449.3	453.2	438.0	424.5	423.4
10°	444.2	445.9	418.3	397.4	391.8
12.5°	436.9	433.0	394.1	364.7	355.2
15°	429.0	418.3	367.0	328.1	313.4
17.5°	419.4	400.3	337.1	289.8	271.7
20°	408.7	381.7	306.1	249.7	230.0
22.5°	396.9	360.8	274.0	212.0	192.2
25°	384.5	339.4	241.8	177.0	158.4
27.5°	371.5	316.8	210.3	145.4	125.1
30°	356.3	293.7	180.4	115.0	96.4
32.5°	342.2	269.5	152.8	89.1	73.3
35°	327.0	246.4	125.1	68.2	60.9
37.5°	311.2	223.2	100.9	57.5	51.3
40°	295.4	200.1	78.9	48.5	42.8
42.5°	279.1	177.6	60.9	40.6	35.0
45°	262.1	155.6	51.3	33.3	28.2
47.5°	245.2	133.6	42.8	26.5	22.5
50°	228.3	112.7	35.5	20.9	18.0
52.5°	212.0	93.0	28.2	16.9	14.7
55°	195.1	73.8	22.0	13.5	11.8
57.5°	178.1	57.5	16.9	11.3	10.1
60°	161.8	43.4	13.0	9.0	8.5
62.5°	144.9	35.0	10.1	7.3	6.8
65°	126.8	27.1	7.9	6.2	5.6
67.5°	110.5	19.7	6.2	5.1	4.5
70°	93.6	13.5	5.1	4.5	3.9
72.5°	77.2	8.5	3.9	3.4	3.4
75°	61.4	5.6	3.4	2.8	2.3
77.5°	46.8	3.4	2.3	2.3	1.7
80°	32.7	2.3	1.7	1.7	1.7
82.5°	20.3	1.7	1.1	1.1	1.1
85°	9.0	0.6	1.1	0.6	0.6
87.5°	1.7	0.6	0.6	0.6	0.6
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	15.77	17.09	16.14	17.41	17.72	2.09	3.41	2.46	3.72	4.04
	3H	18.24	19.41	18.62	19.74	20.11	2.94	4.11	3.32	4.44	4.80
	4H	19.20	20.29	19.60	20.64	21.02	3.22	4.31	3.62	4.66	5.04
	6H	19.89	20.89	20.30	21.26	21.65	3.41	4.41	3.83	4.78	5.18
	8H	20.08	21.03	20.51	21.42	21.83	3.48	4.43	3.91	4.82	5.23
	12H	20.16	21.07	20.60	21.45	21.88	3.51	4.42	3.94	4.80	5.23
4H	2H	15.56	16.65	15.96	17.00	17.38	2.66	3.75	3.06	4.10	4.49
	3H	18.04	18.94	18.45	19.34	19.74	3.69	4.58	4.10	4.99	5.39
	4H	18.98	19.78	19.42	20.20	20.65	4.06	4.86	4.49	5.28	5.72
	6H	19.74	20.43	20.20	20.88	21.34	4.36	5.05	4.82	5.49	5.96
	8H	19.98	20.63	20.45	21.08	21.55	4.45	5.10	4.92	5.54	6.01
	12H	20.11	20.68	20.60	21.16	21.64	4.50	5.07	4.99	5.55	6.03
8H	4H	18.85	19.50	19.32	19.94	20.41	4.43	5.08	4.90	5.52	6.00
	6H	19.59	20.12	20.09	20.61	21.09	4.80	5.32	5.30	5.82	6.30
	8H	19.84	20.31	20.36	20.82	21.31	4.93	5.40	5.45	5.92	6.41
	12H	19.99	20.40	20.50	20.90	21.47	5.02	5.43	5.54	5.93	6.50
12H	4H	18.81	19.38	19.29	19.86	20.33	4.56	5.12	5.04	5.61	6.08
	6H	19.53	20.00	20.05	20.52	21.01	4.92	5.39	5.44	5.90	6.40
	8H	19.80	20.21	20.31	20.70	21.28	5.09	5.50	5.61	6.00	6.57