

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055333

Luminaire Tested: S122R3DR-H485D830-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055333  
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-H485D830-X4F0-XX-UDD-FLL-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

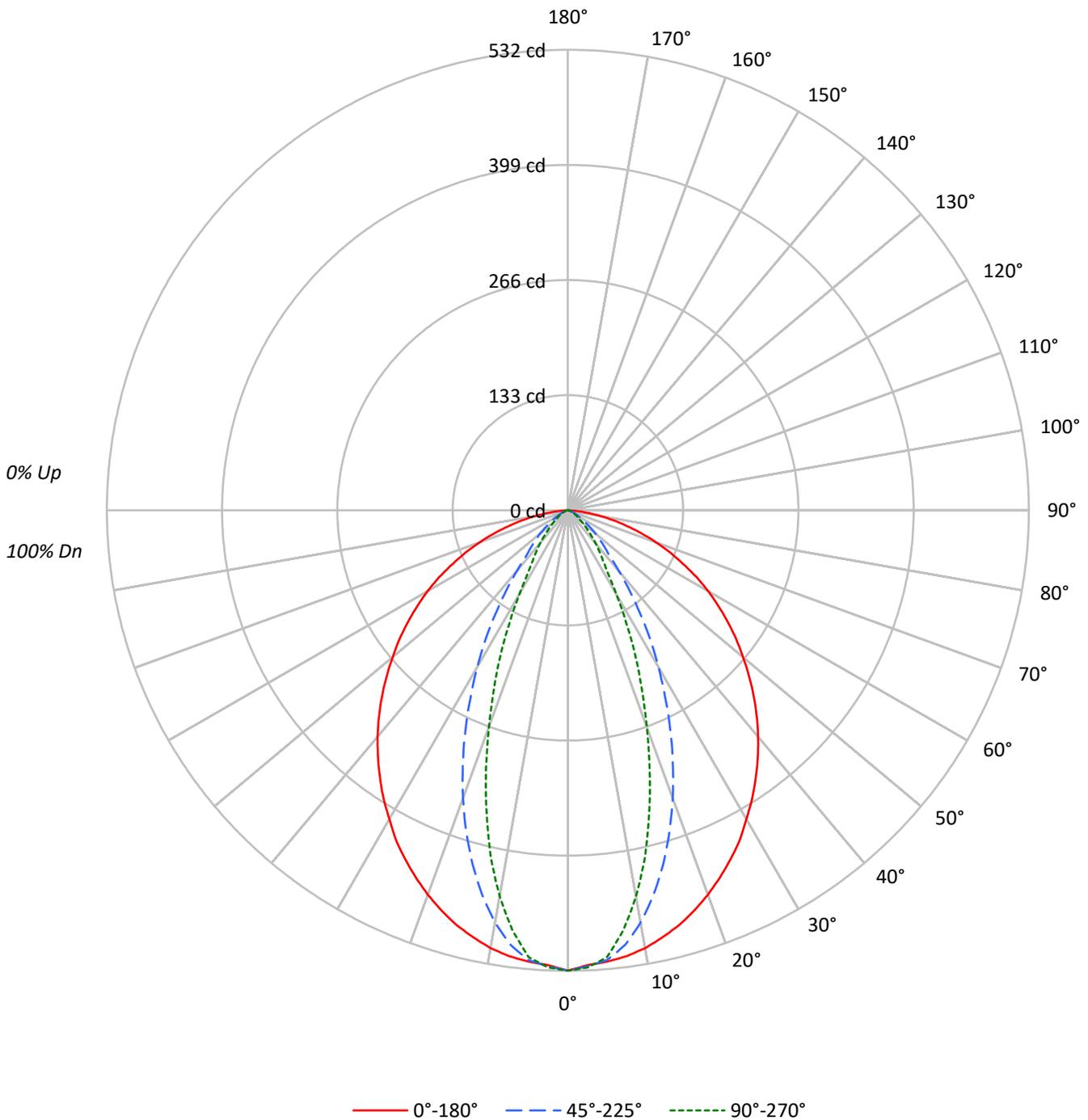
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 609.5 lumens  
Efficiency: N/A  
Efficacy: 35.2 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°	10075	10075	10075
5°	9952	9916	9853
10°	9881	9304	8713
15°	9729	8322	7108
20°	9526	7135	5361
25°	9292	5845	3828
30°	9011	4563	2437
35°	8743	3347	1628
40°	8446	2256	1224
45°	8121	1589	873
50°	7778	1211	616
55°	7449	839	453
60°	7086	568	371
65°	6572	408	291
70°	5994	327	255
75°	5197	285	190
80°	4124	218	218
85°	2261	283	152

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8121 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.6	8.0
10°-20°	119.3	19.6
20°-30°	136.3	22.4
30°-40°	115.6	19.0
40°-50°	86.3	14.2
50°-60°	55.7	9.1
60°-70°	31.1	5.1
70°-80°	13.7	2.2
80°-90°	2.9	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°	304.3	49.9
0°-40°	419.9	68.9
0°-60°	561.9	92.2
0°-90°	609.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	609.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	532	532	532	532	532	
5°	523	530	521	516	518	50
15°	496	484	424	379	362	140
25°	444	392	280	205	183	205
35°	378	285	145	79	70	236
45°	303	180	59	38	33	234
55°	226	85	25	16	14	202
65°	147	31	9	7	6	146
75°	71	6	4	3	3	76
85°	10	1	1	1	1	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	531.8	531.8	531.8	531.8	531.8
2.5°	525.9	533.8	527.2	527.2	528.5
5°	523.3	529.8	521.4	516.2	518.1
7.5°	519.4	524.0	506.4	490.7	489.4
10°	513.6	515.5	483.6	459.5	452.9
12.5°	505.1	500.5	455.6	421.7	410.6
15°	496.0	483.6	424.3	379.3	362.4
17.5°	484.9	462.7	389.7	335.0	314.1
20°	472.5	441.2	353.9	288.7	265.9
22.5°	458.8	417.1	316.7	245.0	222.2
25°	444.5	392.3	279.6	204.6	183.1
27.5°	429.5	366.3	243.1	168.1	144.7
30°	411.9	339.5	208.6	133.0	111.4
32.5°	395.6	311.5	176.6	103.0	84.7
35°	378.0	284.8	144.7	78.9	70.4
37.5°	359.8	258.1	116.7	66.5	59.3
40°	341.5	231.4	91.2	56.0	49.5
42.5°	322.6	205.3	70.4	46.9	40.4
45°	303.1	179.9	59.3	38.5	32.6
47.5°	283.5	154.5	49.5	30.6	26.1
50°	263.9	130.3	41.1	24.1	20.9
52.5°	245.0	107.5	32.6	19.6	16.9
55°	225.5	85.4	25.4	15.6	13.7
57.5°	205.9	66.5	19.6	13.0	11.7
60°	187.0	50.2	15.0	10.4	9.8
62.5°	167.5	40.4	11.7	8.5	7.8
65°	146.6	31.3	9.1	7.2	6.5
67.5°	127.7	22.8	7.2	5.9	5.2
70°	108.2	15.6	5.9	5.2	4.6
72.5°	89.3	9.8	4.6	3.9	3.9
75°	71.0	6.5	3.9	3.3	2.6
77.5°	54.1	3.9	2.6	2.6	2.0
80°	37.8	2.6	2.0	2.0	2.0
82.5°	23.5	2.0	1.3	1.3	1.3
85°	10.4	0.7	1.3	0.7	0.7
87.5°	2.0	0.7	0.7	0.7	0.7
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	16.28	17.60	16.64	17.91	18.23	2.57	3.89	2.93	4.20	4.52
	3H	18.75	19.92	19.13	20.25	20.61	3.43	4.60	3.81	4.93	5.29
	4H	19.70	20.79	20.10	21.14	21.53	3.70	4.80	4.11	5.15	5.53
	6H	20.39	21.39	20.80	21.76	22.16	3.91	4.91	4.32	5.28	5.67
	8H	20.59	21.54	21.02	21.93	22.33	3.98	4.93	4.41	5.32	5.73
	12H	20.67	21.58	21.10	21.96	22.39	4.01	4.92	4.44	5.30	5.73
4H	2H	16.06	17.16	16.47	17.51	17.89	3.14	4.23	3.54	4.58	4.97
	3H	18.55	19.44	18.96	19.84	20.25	4.18	5.08	4.59	5.48	5.88
	4H	19.49	20.29	19.92	20.71	21.15	4.56	5.36	4.99	5.77	6.22
	6H	20.24	20.93	20.71	21.38	21.85	4.86	5.55	5.32	6.00	6.46
	8H	20.49	21.13	20.96	21.58	22.05	4.96	5.60	5.43	6.05	6.52
	12H	20.62	21.19	21.10	21.67	22.14	5.01	5.58	5.50	6.06	6.54
8H	4H	19.36	20.00	19.83	20.45	20.92	4.93	5.57	5.40	6.02	6.49
	6H	20.10	20.62	20.60	21.12	21.60	5.30	5.83	5.80	6.32	6.80
	8H	20.34	20.81	20.86	21.33	21.82	5.44	5.91	5.96	6.43	6.92
	12H	20.49	20.91	21.01	21.40	21.97	5.53	5.95	6.05	6.44	7.02
12H	4H	19.31	19.88	19.80	20.36	20.84	5.05	5.62	5.54	6.10	6.58
	6H	20.03	20.51	20.56	21.02	21.51	5.42	5.89	5.94	6.41	6.90
	8H	20.30	20.71	20.81	21.21	21.78	5.60	6.02	6.12	6.51	7.08