

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: P1055198

Luminaire Tested: S122R3DR-S485D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055198  
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-S485D830-X4F0-XX-UDD-F-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

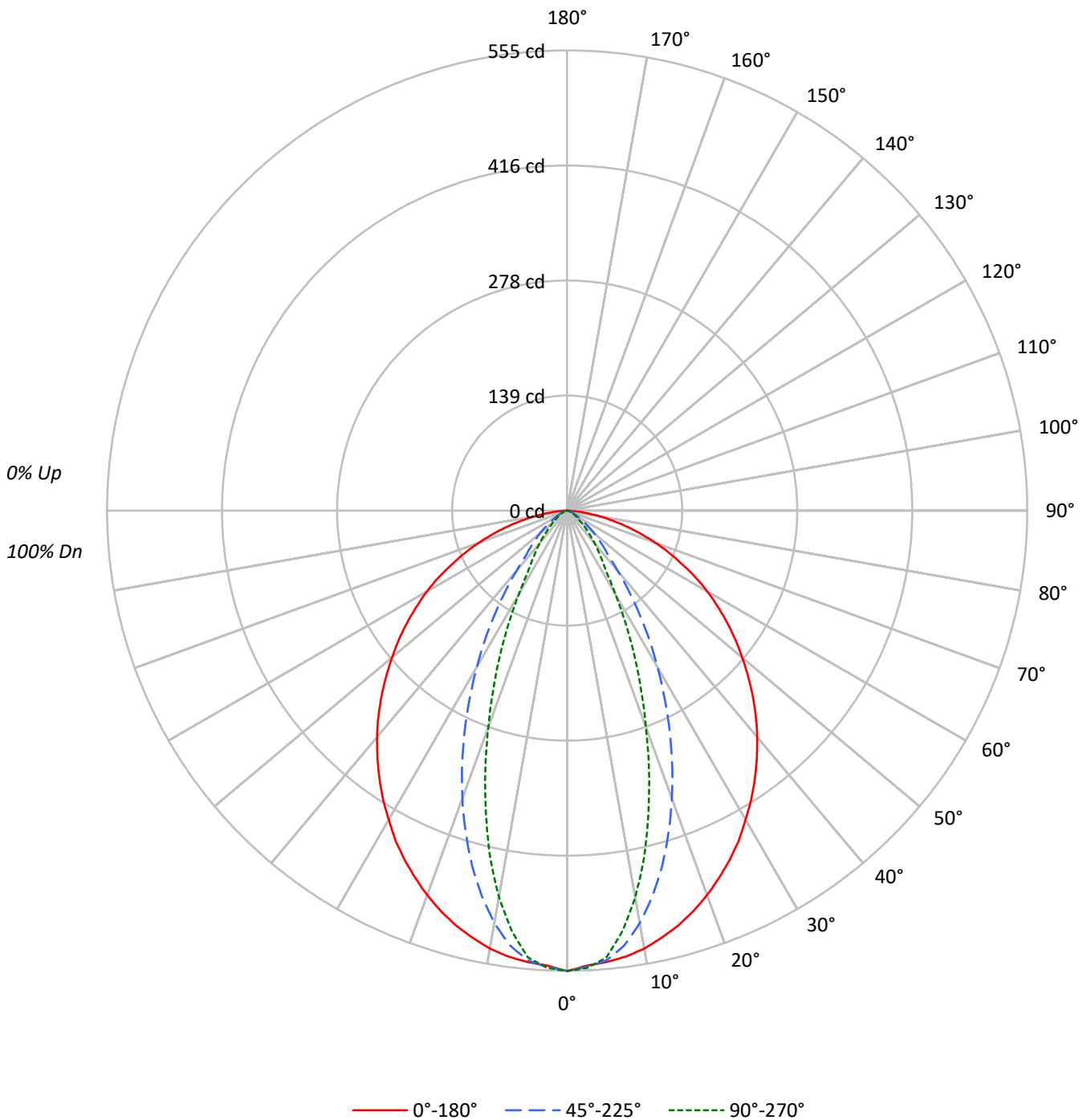
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 636.5 lumens  
Efficiency: N/A  
Efficacy: 33.3 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): 19.1  
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°	10523	10523	10523
5°	10395	10355	10291
10°	10319	9715	9102
15°	10160	8691	7422
20°	9950	7452	5599
25°	9704	6104	3999
30°	9411	4765	2546
35°	9131	3495	1700
40°	8822	2357	1279
45°	8480	1659	911
50°	8126	1264	643
55°	7779	875	472
60°	7400	595	386
65°	6863	426	305
70°	6260	338	266
75°	5432	300	198
80°	4310	218	218
85°	2369	304	152

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8480 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.8	8.0
10°-20°	124.6	19.6
20°-30°	142.4	22.4
30°-40°	120.7	19.0
40°-50°	90.1	14.2
50°-60°	58.2	9.1
60°-70°	32.5	5.1
70°-80°	14.2	2.2
80°-90°	3.0	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°	317.8	49.9
0°-40°	438.5	68.9
0°-60°	586.8	92.2
0°-90°	636.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	636.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	555	555	555	555	555	
5°	547	553	544	539	541	52
15°	518	505	443	396	378	146
25°	464	410	292	214	191	214
35°	395	297	151	82	74	247
45°	316	188	62	40	34	244
55°	236	89	26	16	14	211
65°	153	33	10	8	7	152
75°	74	7	4	3	3	79
85°	11	1	1	1	1	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	555.4	555.4	555.4	555.4	555.4
2.5°	549.3	557.5	550.6	550.6	552.0
5°	546.6	553.4	544.5	539.1	541.1
7.5°	542.5	547.2	528.9	512.5	511.2
10°	536.4	538.4	505.0	479.9	473.1
12.5°	527.5	522.7	475.8	440.4	428.8
15°	518.0	505.0	443.1	396.1	378.4
17.5°	506.4	483.3	407.0	349.9	328.1
20°	493.5	460.8	369.6	301.5	277.7
22.5°	479.2	435.6	330.8	255.9	232.1
25°	464.2	409.8	292.0	213.7	191.3
27.5°	448.5	382.5	253.9	175.6	151.1
30°	430.2	354.6	217.8	138.9	116.4
32.5°	413.2	325.4	184.5	107.5	88.5
35°	394.8	297.4	151.1	82.4	73.5
37.5°	375.7	269.5	121.8	69.4	61.9
40°	356.7	241.6	95.3	58.5	51.7
42.5°	336.9	214.4	73.5	49.0	42.2
45°	316.5	187.9	61.9	40.2	34.0
47.5°	296.1	161.3	51.7	32.0	27.2
50°	275.7	136.1	42.9	25.2	21.8
52.5°	255.9	112.3	34.0	20.4	17.7
55°	235.5	89.2	26.5	16.3	14.3
57.5°	215.1	69.4	20.4	13.6	12.3
60°	195.3	52.4	15.7	10.9	10.2
62.5°	174.9	42.2	12.3	8.8	8.2
65°	153.1	32.7	9.5	7.5	6.8
67.5°	133.4	23.8	7.5	6.1	5.4
70°	113.0	16.3	6.1	5.4	4.8
72.5°	93.2	10.2	4.8	4.1	4.1
75°	74.2	6.8	4.1	3.4	2.7
77.5°	56.5	4.1	2.7	2.7	2.0
80°	39.5	2.7	2.0	2.0	2.0
82.5°	24.5	2.0	1.4	1.4	1.4
85°	10.9	0.7	1.4	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	16.43	17.75	16.79	18.06	18.37	2.74	4.06	3.10	4.37	4.69
	3H	18.90	20.07	19.28	20.40	20.76	3.58	4.75	3.96	5.08	5.45
	4H	19.85	20.94	20.26	21.30	21.68	3.86	4.95	4.26	5.30	5.68
	6H	20.54	21.54	20.96	21.92	22.31	4.04	5.04	4.45	5.41	5.81
	8H	20.74	21.69	21.17	22.08	22.48	4.12	5.07	4.55	5.46	5.86
	12H	20.82	21.73	21.25	22.11	22.54	4.14	5.05	4.58	5.44	5.87
4H	2H	16.21	17.30	16.61	17.65	18.04	3.31	4.40	3.71	4.75	5.13
	3H	18.70	19.59	19.11	20.00	20.40	4.33	5.23	4.75	5.63	6.04
	4H	19.64	20.44	20.07	20.86	21.30	4.70	5.50	5.14	5.92	6.36
	6H	20.40	21.09	20.86	21.53	22.00	4.98	5.67	5.44	6.12	6.58
	8H	20.64	21.28	21.11	21.73	22.20	5.09	5.73	5.55	6.18	6.65
	12H	20.77	21.34	21.25	21.82	22.29	5.14	5.70	5.62	6.19	6.66
8H	4H	19.51	20.15	19.98	20.60	21.07	5.07	5.72	5.54	6.16	6.63
	6H	20.25	20.77	20.75	21.27	21.75	5.42	5.95	5.92	6.44	6.92
	8H	20.49	20.96	21.01	21.48	21.97	5.57	6.04	6.09	6.55	7.04
	12H	20.64	21.06	21.16	21.55	22.12	5.66	6.07	6.17	6.57	7.14
12H	4H	19.46	20.03	19.95	20.51	20.99	5.19	5.76	5.68	6.25	6.72
	6H	20.19	20.66	20.71	21.17	21.66	5.54	6.01	6.06	6.53	7.02
	8H	20.45	20.86	20.96	21.36	21.93	5.73	6.14	6.24	6.64	7.21