

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: P1055203

Luminaire Tested: S122R3DR-S485D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055203  
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-S485D840-X4F0-XX-UDD-F-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

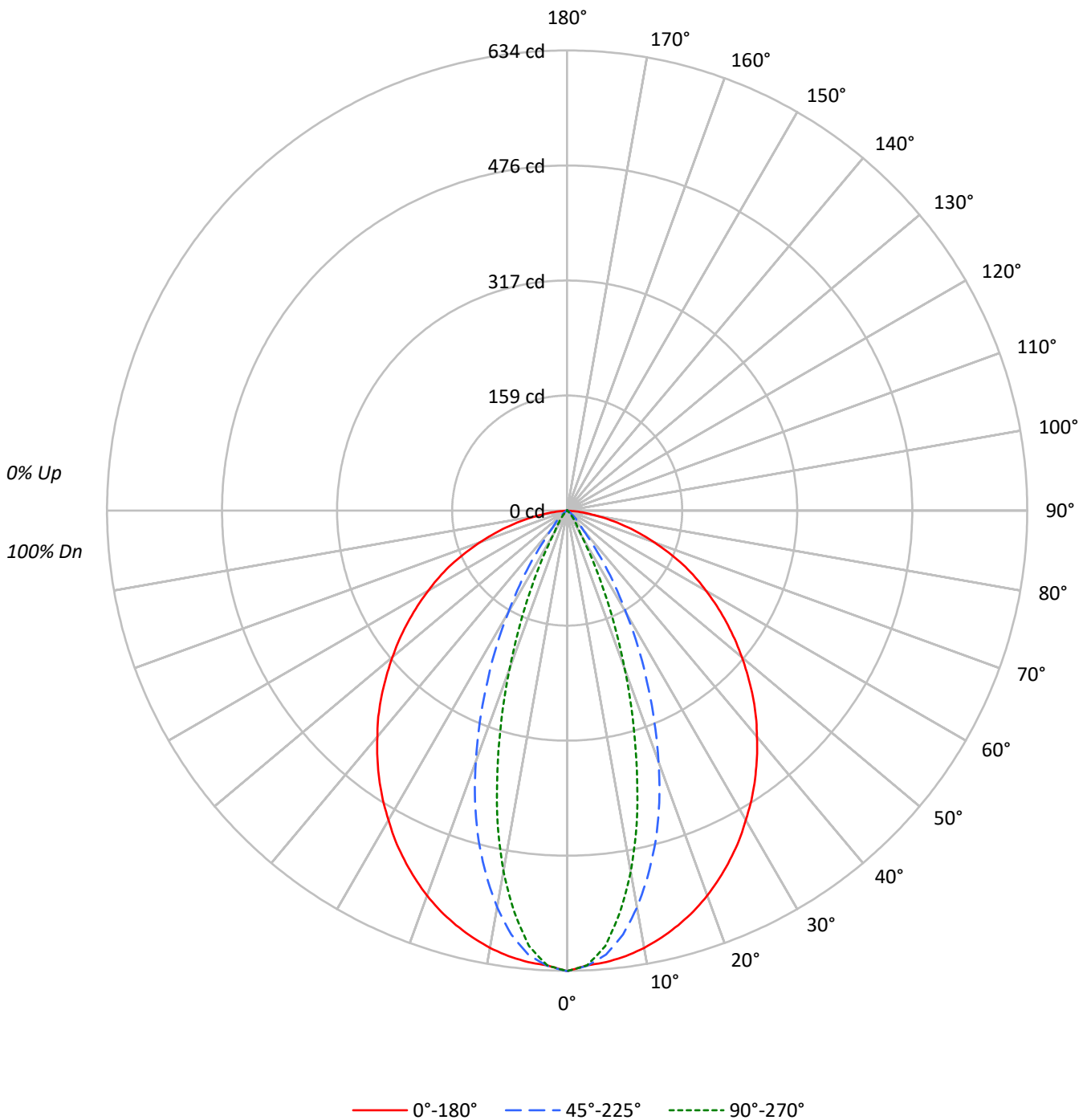
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 577.2 lumens  
Efficiency: N/A  
Efficacy: 30.2 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): 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	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	66	63	61				61
6	82	72	65	60	80	71	64	59	69	63	59	68	63	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	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°	12021	12021	12021
5°	11873	11677	11457
10°	11772	10677	9723
15°	11600	9240	7281
20°	11381	7426	4661
25°	11098	5444	2394
30°	10770	3557	781
35°	10440	1973	456
40°	10063	794	252
45°	9691	528	96
50°	9264	301	44
55°	8839	145	23
60°	8374	57	0
65°	7881	31	0
70°	7068	39	0
75°	6083	51	0
80°	4615	0	0
85°	1913	152	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9691 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.9	9.9
10°-20°	132.2	22.9
20°-30°	134.2	23.2
30°-40°	100.7	17.4
40°-50°	70.5	12.2
50°-60°	43.2	7.5
60°-70°	25.7	4.5
70°-80°	11.8	2.1
80°-90°	2.1	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°	323.2	56.0
0°-40°	423.9	73.4
0°-60°	537.6	93.1
0°-90°	577.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	577.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	624	630	614	602	602	59
15°	591	559	471	399	371	167
25°	531	438	260	149	114	244
35°	451	294	85	26	20	282
45°	362	155	20	6	4	279
55°	268	47	4	2	1	239
65°	176	14	1	1	0	173
75°	83	2	1	1	0	88
85°	9	0	1	1	0	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	634.5	634.5	634.5	634.5	634.5
2.5°	627.2	636.7	627.9	626.4	627.2
5°	624.3	630.1	614.0	602.4	602.4
7.5°	619.2	619.2	589.3	565.2	557.9
10°	611.9	603.8	555.0	516.3	505.4
12.5°	602.4	583.4	514.9	460.2	442.7
15°	591.4	559.4	471.1	398.9	371.2
17.5°	579.0	532.4	422.2	332.5	300.5
20°	564.5	503.2	368.3	264.7	231.2
22.5°	548.4	471.1	313.6	204.2	168.5
25°	530.9	437.6	260.4	148.8	114.5
27.5°	512.7	402.6	211.5	102.1	70.0
30°	492.3	366.1	162.6	60.5	35.7
32.5°	472.6	331.1	121.8	32.8	26.3
35°	451.4	293.9	85.3	25.5	19.7
37.5°	429.5	258.9	52.5	19.0	14.6
40°	406.9	223.2	32.1	13.9	10.2
42.5°	385.1	189.6	25.5	9.5	6.6
45°	361.7	155.3	19.7	5.8	3.6
47.5°	337.7	124.0	14.6	3.6	2.2
50°	314.3	96.3	10.2	2.2	1.5
52.5°	291.0	70.7	6.6	1.5	0.7
55°	267.6	47.4	4.4	1.5	0.7
57.5°	244.3	33.5	2.9	0.7	0.7
60°	221.0	26.3	1.5	0.7	0.0
62.5°	199.1	20.4	1.5	0.7	0.7
65°	175.8	13.9	0.7	0.7	0.0
67.5°	151.0	8.8	0.7	0.7	0.0
70°	127.6	5.1	0.7	0.7	0.0
72.5°	105.0	2.9	0.7	0.7	0.0
75°	83.1	1.5	0.7	0.7	0.0
77.5°	62.0	0.7	0.0	0.7	0.0
80°	42.3	0.0	0.0	0.7	0.0
82.5°	24.8	0.0	0.0	0.7	0.0
85°	8.8	0.0	0.7	0.7	0.0
87.5°	0.0	0.0	0.7	0.7	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	14.85	16.11	15.21	16.42	16.74	0.00	0.00	0.00	0.00	0.00
	3H	18.59	19.71	18.97	20.04	20.41	0.00	0.00	0.00	0.00	0.00
	4H	19.90	20.94	20.31	21.29	21.68	0.00	0.00	0.00	0.00	0.00
	6H	20.76	21.71	21.17	22.08	22.48	0.00	0.00	0.00	0.00	0.00
	8H	20.97	21.87	21.40	22.27	22.67	0.00	0.00	0.00	0.00	0.00
	12H	21.04	21.90	21.47	22.28	22.71	0.00	0.00	0.00	0.00	0.00
4H	2H	14.60	15.64	15.01	15.99	16.38	0.00	0.00	0.00	0.00	0.00
	3H	18.35	19.20	18.76	19.60	20.01	0.00	0.00	0.00	0.00	0.00
	4H	19.64	20.40	20.08	20.82	21.27	0.00	0.00	0.00	0.00	0.00
	6H	20.56	21.22	21.02	21.66	22.13	0.00	0.00	0.00	0.00	0.00
	8H	20.82	21.43	21.29	21.88	22.35	0.00	0.00	0.00	0.00	0.00
	12H	20.92	21.46	21.41	21.94	22.42	0.00	0.00	0.00	0.00	0.00
8H	4H	19.50	20.11	19.97	20.56	21.03	0.00	0.00	0.00	0.00	0.00
	6H	20.40	20.89	20.90	21.39	21.87	0.00	0.00	0.00	0.00	0.00
	8H	20.66	21.10	21.18	21.62	22.11	0.00	0.00	0.00	0.00	0.00
	12H	20.77	21.16	21.29	21.66	22.23	0.00	0.00	0.00	0.00	0.00
12H	4H	19.45	19.99	19.94	20.47	20.95	0.00	0.00	0.00	0.00	0.00
	6H	20.33	20.78	20.86	21.30	21.79	0.00	0.00	0.00	0.00	0.00
	8H	20.61	21.00	21.13	21.50	22.07	0.00	0.00	0.00	0.00	0.00