

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: P1439645

Luminaire Tested: S122DR-H485D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439645  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DR-H485D840-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

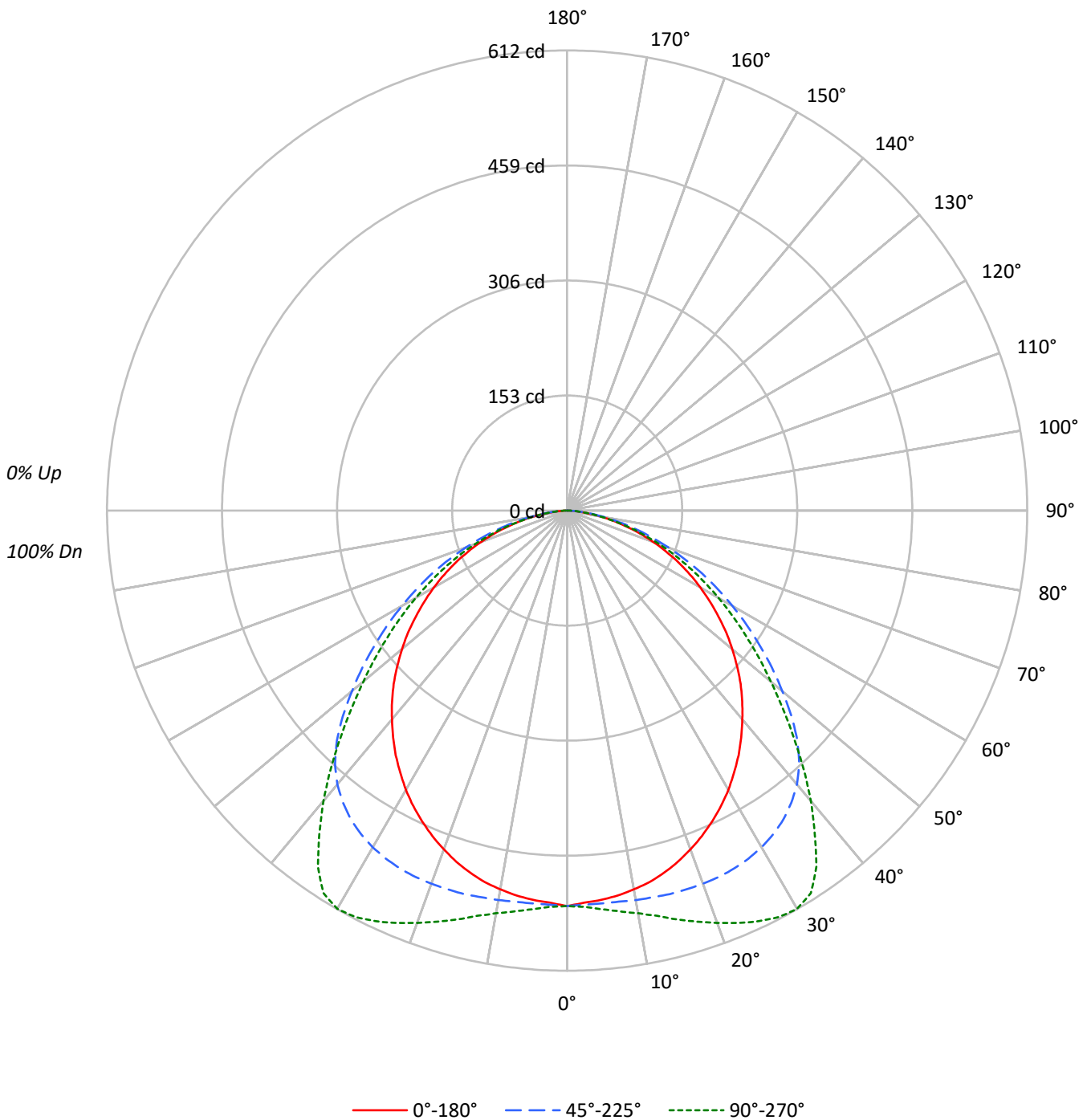
Lumens per Lamp: N/A  
Luminaire Lumens: 1617.8 lumens  
Efficiency: N/A  
Efficacy: 93.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

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	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25

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

	0°	45°	90°
0°	9966	9966	9966
5°	9886	9977	10121
10°	9842	10119	10462
15°	9780	10358	11041
20°	9668	10647	11764
25°	9537	10981	12597
30°	9383	11312	13378
35°	9191	11597	13368
40°	8965	11758	12467
45°	8743	11602	11417
50°	8447	11009	10422
55°	8112	10326	9579
60°	7749	9617	8814
65°	7330	8863	8033
70°	6747	7921	7201
75°	5959	6859	6207
80°	4921	5444	4921
85°	3261	3565	3413

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 11693 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.3	3.1
10°-20°	150.3	9.3
20°-30°	243.8	15.1
30°-40°	308.5	19.1
40°-50°	308.9	19.1
50°-60°	258.8	16.0
60°-70°	182.4	11.3
70°-80°	94.1	5.8
80°-90°	20.8	1.3
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°	444.3	27.5
0°-40°	752.8	46.5
0°-60°	1320.5	81.6
0°-90°	1617.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1617.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	526	526	526	526	526	
5°	520	529	525	527	532	49
15°	499	513	528	549	563	141
25°	456	481	525	577	603	210
35°	397	430	501	566	578	248
45°	326	360	433	436	426	251
55°	246	276	313	300	290	220
65°	164	182	198	185	179	162
75°	81	90	94	87	85	87
85°	15	16	16	16	16	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	526.0	526.0	526.0	526.0	526.0
2.5°	521.9	530.1	524.6	525.3	527.4
5°	519.8	528.7	524.6	527.4	532.2
7.5°	516.4	526.0	524.6	530.1	537.6
10°	511.6	522.6	526.0	535.6	543.8
12.5°	506.2	517.8	526.7	541.7	552.0
15°	498.6	513.0	528.1	549.3	562.9
17.5°	489.8	506.9	528.1	557.5	573.2
20°	479.5	499.3	528.1	564.3	583.5
22.5°	468.5	490.4	527.4	570.5	593.7
25°	456.2	480.9	525.3	576.6	602.6
27.5°	443.2	469.9	521.9	581.4	609.5
30°	428.9	457.6	517.1	583.5	611.5
32.5°	413.1	444.6	510.3	579.4	603.3
35°	397.4	429.6	501.4	566.4	578.0
37.5°	380.3	413.8	489.8	541.1	541.1
40°	362.5	396.7	475.4	506.2	504.1
42.5°	344.7	378.9	456.9	472.0	465.1
45°	326.3	360.5	433.0	436.4	426.1
47.5°	306.4	340.0	404.9	400.1	388.5
50°	286.6	319.4	373.5	365.3	353.6
52.5°	266.8	298.2	343.4	331.7	321.5
55°	245.6	275.7	312.6	299.6	290.0
57.5°	225.0	253.1	283.2	268.8	260.6
60°	204.5	229.8	253.8	240.1	232.6
62.5°	184.0	205.9	225.7	212.0	205.2
65°	163.5	181.9	197.7	185.4	179.2
67.5°	142.3	158.7	169.6	158.7	154.6
70°	121.8	134.8	143.0	133.4	130.0
72.5°	101.2	112.2	117.7	110.1	106.7
75°	81.4	89.6	93.7	86.9	84.8
77.5°	62.2	68.4	70.5	65.7	62.9
80°	45.1	48.6	49.9	46.5	45.1
82.5°	28.0	30.8	32.1	29.4	28.7
85°	15.0	16.4	16.4	16.4	15.7
87.5°	5.5	6.8	6.8	6.8	6.2
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	19.47	21.09	19.84	21.40	21.71	19.99	21.60	20.35	21.91	22.23
	3H	21.04	22.50	21.42	22.82	23.18	21.45	22.91	21.83	23.23	23.59
	4H	21.58	22.95	21.98	23.29	23.67	21.95	23.31	22.35	23.66	24.04
	6H	21.92	23.19	22.33	23.55	23.94	22.25	23.51	22.66	23.88	24.27
	8H	22.01	23.21	22.43	23.60	24.00	22.32	23.53	22.74	23.92	24.31
	12H	22.04	23.20	22.47	23.58	24.01	22.35	23.51	22.78	23.89	24.32
4H	2H	20.23	21.59	20.63	21.94	22.32	20.62	21.99	21.02	22.34	22.72
	3H	22.00	23.14	22.41	23.54	23.94	22.29	23.43	22.70	23.83	24.23
	4H	22.65	23.67	23.08	24.09	24.52	22.89	23.91	23.32	24.33	24.76
	6H	23.09	23.98	23.54	24.43	24.88	23.28	24.18	23.74	24.62	25.08
	8H	23.20	24.04	23.66	24.48	24.94	23.38	24.22	23.84	24.66	25.13
	12H	23.26	24.01	23.74	24.49	24.96	23.44	24.19	23.92	24.67	25.14
8H	4H	22.93	23.77	23.39	24.21	24.67	23.14	23.98	23.60	24.42	24.89
	6H	23.47	24.16	23.96	24.65	25.13	23.63	24.32	24.12	24.81	25.29
	8H	23.63	24.25	24.14	24.76	25.24	23.77	24.39	24.28	24.90	25.39
	12H	23.73	24.28	24.24	24.77	25.33	23.87	24.42	24.38	24.91	25.47
12H	4H	22.94	23.70	23.42	24.17	24.64	23.16	23.91	23.64	24.39	24.86
	6H	23.50	24.12	24.01	24.63	25.11	23.65	24.28	24.16	24.79	25.27
	8H	23.70	24.25	24.21	24.74	25.30	23.84	24.39	24.35	24.88	25.45