

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: P1439690

Luminaire Tested: S122DR-S485D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439690  
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-S485D840-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

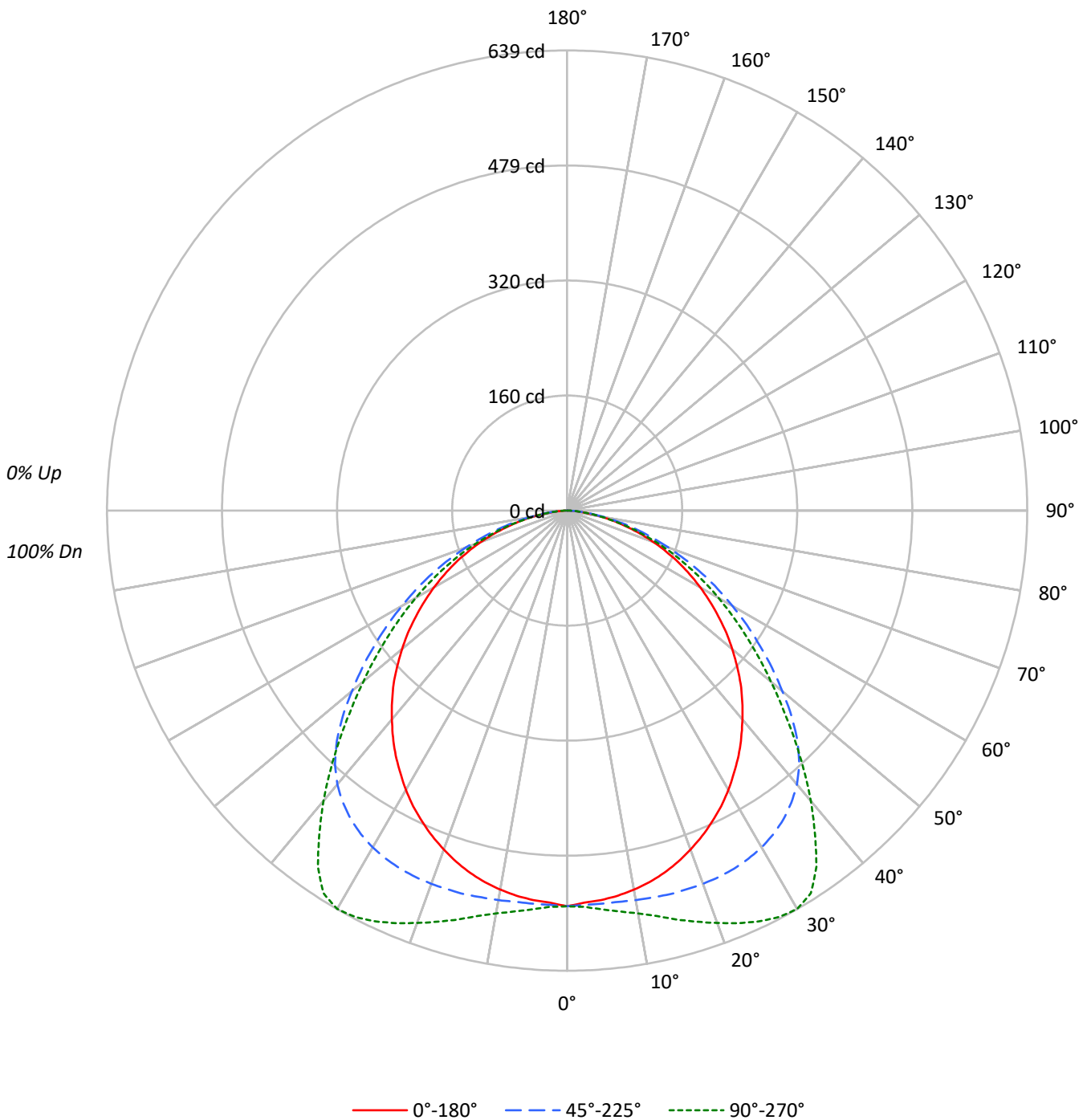
Lumens per Lamp: N/A  
Luminaire Lumens: 1689.6 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	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°	10409	10409	10409
5°	10325	10420	10570
10°	10281	10569	10925
15°	10215	10817	11531
20°	10097	11119	12287
25°	9961	11468	13157
30°	9799	11816	13973
35°	9601	12110	13960
40°	9364	12279	13021
45°	9131	12116	11926
50°	8822	11495	10885
55°	8472	10785	10005
60°	8094	10041	9204
65°	7652	9257	8392
70°	7046	8270	7517
75°	6222	7166	6486
80°	5139	5684	5139
85°	3413	3717	3565

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 12212 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.5	3.1
10°-20°	156.9	9.3
20°-30°	254.6	15.1
30°-40°	322.2	19.1
40°-50°	322.6	19.1
50°-60°	270.2	16.0
60°-70°	190.4	11.3
70°-80°	98.2	5.8
80°-90°	21.8	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°	464.1	27.5
0°-40°	786.2	46.5
0°-60°	1379.1	81.6
0°-90°	1689.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1689.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	549	549	549	549	549	
5°	543	552	548	551	556	52
15°	521	536	552	574	588	147
25°	476	502	549	602	629	219
35°	415	449	524	592	604	259
45°	341	376	452	456	445	262
55°	256	288	326	313	303	230
65°	171	190	206	194	187	169
75°	85	94	98	91	89	90
85°	16	17	17	17	16	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	549.4	549.4	549.4	549.4	549.4
2.5°	545.1	553.6	547.9	548.6	550.8
5°	542.9	552.2	547.9	550.8	555.8
7.5°	539.4	549.4	547.9	553.6	561.5
10°	534.4	545.8	549.4	559.4	567.9
12.5°	528.6	540.8	550.1	565.8	576.5
15°	520.8	535.8	551.5	573.6	587.9
17.5°	511.5	529.4	551.5	582.2	598.6
20°	500.8	521.5	551.5	589.4	609.4
22.5°	489.3	512.2	550.8	595.8	620.1
25°	476.5	502.2	548.6	602.2	629.4
27.5°	462.9	490.8	545.1	607.2	636.5
30°	447.9	477.9	540.1	609.4	638.7
32.5°	431.5	464.3	532.9	605.1	630.1
35°	415.1	448.6	523.6	591.5	603.6
37.5°	397.2	432.2	511.5	565.1	565.1
40°	378.6	414.3	496.5	528.6	526.5
42.5°	360.0	395.8	477.2	492.9	485.8
45°	340.8	376.5	452.2	455.8	445.1
47.5°	320.0	355.0	422.9	417.9	405.8
50°	299.3	333.6	390.0	381.5	369.3
52.5°	278.6	311.5	358.6	346.5	335.8
55°	256.5	287.9	326.5	312.9	302.9
57.5°	235.0	264.3	295.8	280.7	272.2
60°	213.6	240.0	265.0	250.7	242.9
62.5°	192.2	215.0	235.7	221.5	214.3
65°	170.7	190.0	206.5	193.6	187.2
67.5°	148.6	165.7	177.2	165.7	161.4
70°	127.2	140.7	149.3	139.3	135.7
72.5°	105.7	117.2	122.9	115.0	111.4
75°	85.0	93.6	97.9	90.7	88.6
77.5°	65.0	71.4	73.6	68.6	65.7
80°	47.1	50.7	52.1	48.6	47.1
82.5°	29.3	32.1	33.6	30.7	30.0
85°	15.7	17.1	17.1	17.1	16.4
87.5°	5.7	7.1	7.1	7.1	6.4
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	19.62	21.24	19.99	21.55	21.86	20.14	21.75	20.50	22.06	22.38
	3H	21.19	22.65	21.57	22.97	23.33	21.60	23.06	21.98	23.38	23.74
	4H	21.73	23.10	22.13	23.44	23.82	22.10	23.46	22.50	23.81	24.19
	6H	22.07	23.34	22.48	23.70	24.09	22.40	23.66	22.81	24.03	24.42
	8H	22.16	23.36	22.58	23.75	24.15	22.47	23.68	22.89	24.07	24.46
	12H	22.19	23.35	22.62	23.73	24.16	22.50	23.66	22.93	24.04	24.47
4H	2H	20.38	21.74	20.78	22.09	22.47	20.78	22.14	21.17	22.49	22.87
	3H	22.15	23.29	22.56	23.69	24.09	22.44	23.58	22.85	23.98	24.38
	4H	22.80	23.82	23.23	24.24	24.67	23.04	24.06	23.47	24.48	24.91
	6H	23.24	24.13	23.69	24.58	25.03	23.43	24.33	23.89	24.77	25.23
	8H	23.35	24.19	23.81	24.63	25.09	23.53	24.37	23.99	24.81	25.28
	12H	23.41	24.16	23.89	24.64	25.11	23.59	24.34	24.07	24.82	25.29
8H	4H	23.08	23.92	23.54	24.36	24.82	23.29	24.13	23.75	24.57	25.04
	6H	23.62	24.31	24.11	24.80	25.28	23.78	24.47	24.27	24.96	25.44
	8H	23.78	24.40	24.29	24.91	25.39	23.92	24.54	24.43	25.05	25.54
	12H	23.88	24.43	24.39	24.92	25.48	24.02	24.57	24.53	25.06	25.63
12H	4H	23.09	23.85	23.58	24.32	24.79	23.31	24.06	23.79	24.54	25.01
	6H	23.65	24.27	24.16	24.78	25.26	23.80	24.43	24.32	24.94	25.42
	8H	23.85	24.40	24.36	24.89	25.45	23.99	24.54	24.50	25.03	25.60