

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: P1439691

Luminaire Tested: S122DR-S485D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439691  
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-S485D850-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

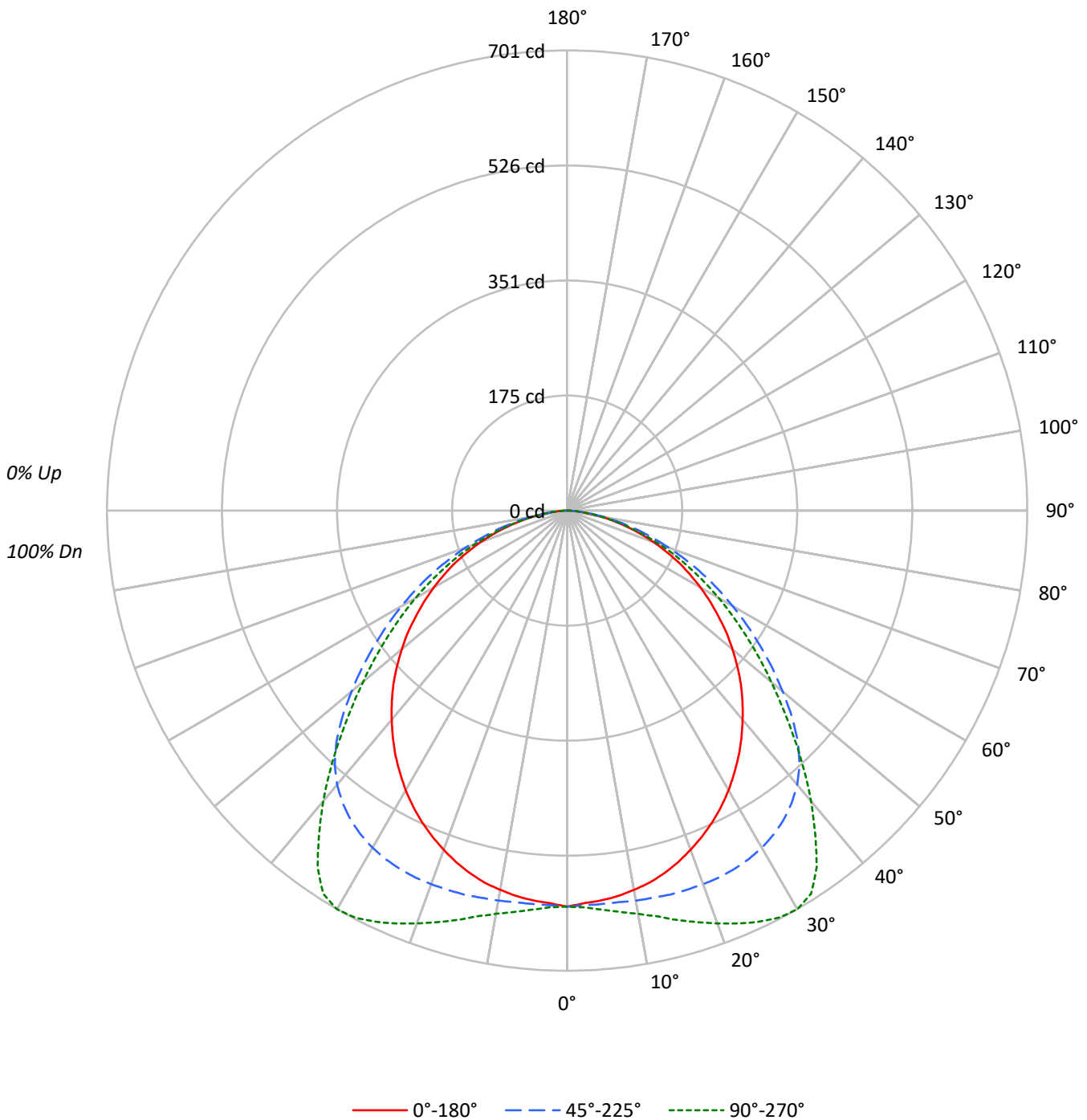
Lumens per Lamp: N/A  
Luminaire Lumens: 1855.4 lumens  
Efficiency: N/A  
Efficacy: 97.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

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	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°	11430	11430	11430
5°	11339	11443	11607
10°	11289	11606	11999
15°	11217	11878	12663
20°	11087	12210	13492
25°	10939	12595	14447
30°	10761	12975	15342
35°	10542	13299	15332
40°	10284	13484	14300
45°	10026	13306	13094
50°	9688	12624	11955
55°	9302	11842	10986
60°	8889	11030	10106
65°	8406	10163	9213
70°	7733	9085	8259
75°	6837	7869	7122
80°	5652	6252	5652
85°	3761	4087	3913

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 13410 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.7	3.1
10°-20°	172.3	9.3
20°-30°	279.6	15.1
30°-40°	353.8	19.1
40°-50°	354.3	19.1
50°-60°	296.8	16.0
60°-70°	209.1	11.3
70°-80°	107.9	5.8
80°-90°	23.9	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°	509.6	27.5
0°-40°	863.4	46.5
0°-60°	1514.5	81.6
0°-90°	1855.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1855.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	603	603	603	603	603	
5°	596	606	602	605	610	57
15°	572	588	606	630	646	161
25°	523	552	602	661	691	241
35°	456	493	575	650	663	285
45°	374	413	497	500	489	288
55°	282	316	358	344	333	252
65°	188	209	227	213	206	185
75°	93	103	108	100	97	99
85°	17	19	19	19	18	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	603.3	603.3	603.3	603.3	603.3
2.5°	598.6	608.0	601.7	602.5	604.9
5°	596.2	606.4	601.7	604.9	610.3
7.5°	592.3	603.3	601.7	608.0	616.6
10°	586.8	599.4	603.3	614.3	623.7
12.5°	580.5	593.9	604.1	621.3	633.1
15°	571.9	588.4	605.6	630.0	645.6
17.5°	561.7	581.3	605.6	639.4	657.4
20°	549.9	572.7	605.6	647.2	669.2
22.5°	537.4	562.5	604.9	654.3	680.9
25°	523.3	551.5	602.5	661.3	691.1
27.5°	508.4	539.0	598.6	666.8	699.0
30°	491.9	524.8	593.1	669.2	701.3
32.5°	473.8	509.9	585.2	664.5	691.9
35°	455.8	492.7	575.0	649.6	662.9
37.5°	436.2	474.6	561.7	620.5	620.5
40°	415.8	455.0	545.2	580.5	578.2
42.5°	395.4	434.6	524.0	541.3	533.5
45°	374.2	413.4	496.6	500.5	488.7
47.5°	351.5	389.9	464.4	458.9	445.6
50°	328.7	366.4	428.3	418.9	405.6
52.5°	306.0	342.0	393.8	380.5	368.7
55°	281.6	316.2	358.5	343.6	332.6
57.5°	258.1	290.3	324.8	308.3	298.9
60°	234.6	263.6	291.1	275.4	266.7
62.5°	211.0	236.1	258.9	243.2	235.4
65°	187.5	208.7	226.7	212.6	205.5
67.5°	163.2	182.0	194.6	182.0	177.3
70°	139.6	154.5	164.0	153.0	149.1
72.5°	116.1	128.7	134.9	126.3	122.4
75°	93.4	102.8	107.5	99.6	97.3
77.5°	71.4	78.5	80.8	75.3	72.2
80°	51.8	55.7	57.3	53.3	51.8
82.5°	32.2	35.3	36.9	33.7	32.9
85°	17.3	18.8	18.8	18.8	18.0
87.5°	6.3	7.8	7.8	7.8	7.1
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	19.95	21.56	20.31	21.88	22.19	20.46	22.07	20.83	22.39	22.70
	3H	21.52	22.97	21.90	23.30	23.66	21.93	23.38	22.31	23.71	24.07
	4H	22.06	23.42	22.46	23.77	24.15	22.42	23.79	22.82	24.14	24.51
	6H	22.40	23.66	22.81	24.03	24.42	22.72	23.99	23.13	24.35	24.74
	8H	22.48	23.69	22.91	24.08	24.48	22.80	24.00	23.22	24.39	24.79
	12H	22.52	23.68	22.95	24.06	24.49	22.83	23.99	23.26	24.37	24.80
4H	2H	20.70	22.07	21.10	22.42	22.79	21.10	22.47	21.50	22.82	23.19
	3H	22.47	23.61	22.88	24.01	24.41	22.77	23.91	23.18	24.31	24.71
	4H	23.12	24.15	23.55	24.56	25.00	23.36	24.39	23.79	24.80	25.24
	6H	23.57	24.46	24.02	24.90	25.36	23.76	24.65	24.21	25.10	25.55
	8H	23.68	24.51	24.14	24.96	25.42	23.86	24.70	24.32	25.14	25.60
	12H	23.74	24.49	24.22	24.96	25.43	23.92	24.67	24.40	25.14	25.61
8H	4H	23.40	24.24	23.87	24.68	25.15	23.62	24.46	24.08	24.90	25.37
	6H	23.94	24.64	24.44	25.13	25.60	24.10	24.80	24.60	25.29	25.76
	8H	24.10	24.73	24.61	25.23	25.72	24.25	24.87	24.76	25.38	25.86
	12H	24.21	24.76	24.71	25.25	25.81	24.35	24.90	24.85	25.39	25.95
12H	4H	23.42	24.17	23.90	24.65	25.12	23.64	24.39	24.12	24.86	25.33
	6H	23.97	24.60	24.48	25.10	25.59	24.13	24.75	24.64	25.26	25.75
	8H	24.18	24.73	24.69	25.22	25.78	24.32	24.87	24.83	25.36	25.92