

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: P1439689

Luminaire Tested: S122DR-S485D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439689  
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-S485D835-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

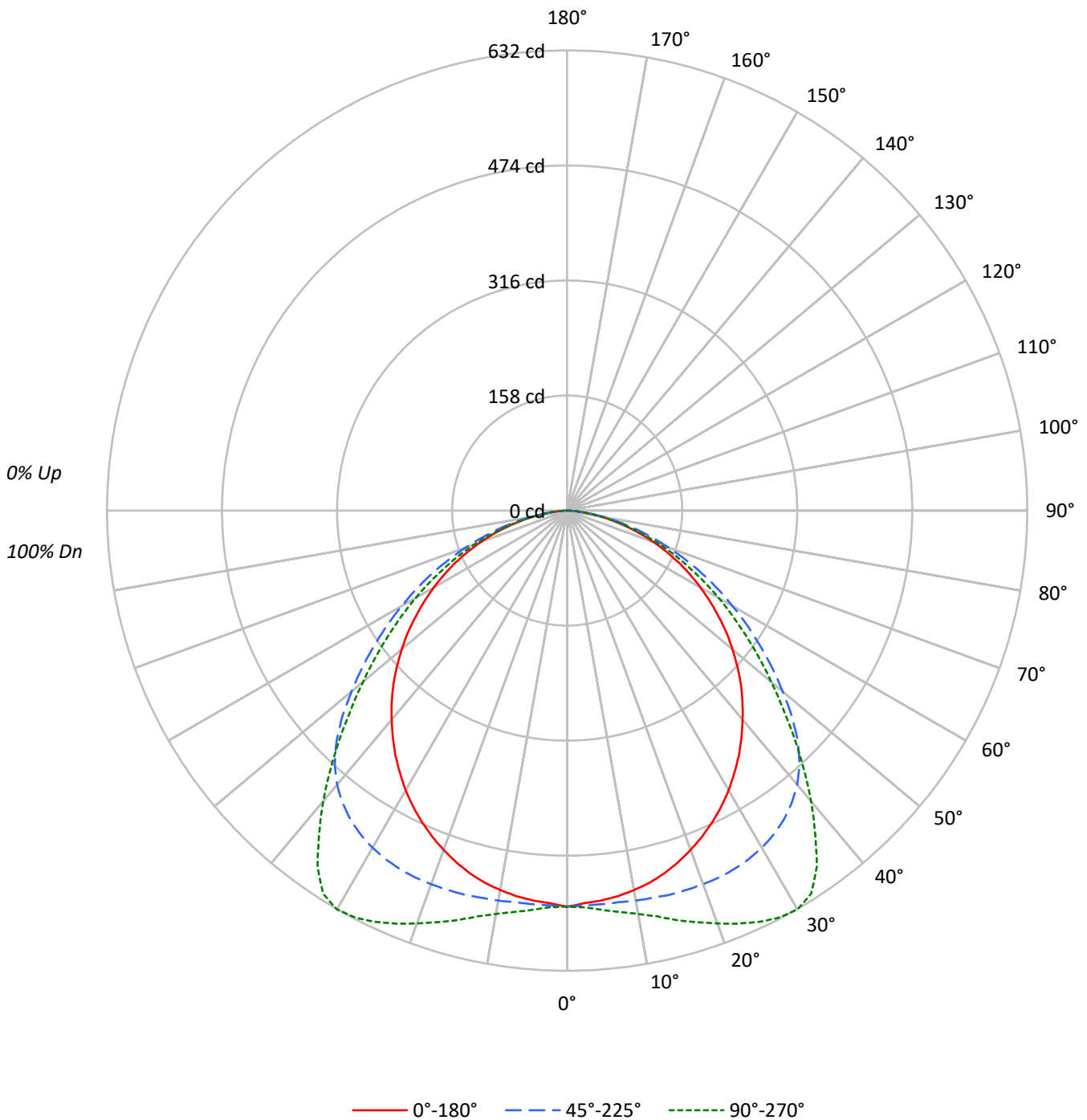
Lumens per Lamp: N/A  
Luminaire Lumens: 1673.1 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85					85			
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51					51			
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44					44			
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39					39			
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34					34			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30					30			
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27					27			
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25					25			

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

	0°	45°	90°
0°	10307	10307	10307
5°	10224	10319	10468
10°	10179	10466	10820
15°	10115	10711	11419
20°	9998	11010	12166
25°	9863	11357	13028
30°	9702	11700	13835
35°	9506	11992	13824
40°	9272	12158	12895
45°	9040	11998	11808
50°	8736	11383	10779
55°	8390	10679	9906
60°	8014	9943	9113
65°	7581	9163	8307
70°	6974	8187	7445
75°	6164	7093	6420
80°	5095	5630	5095
85°	3391	3695	3543

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 12092 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.0	3.1
10°-20°	155.4	9.3
20°-30°	252.1	15.1
30°-40°	319.0	19.1
40°-50°	319.5	19.1
50°-60°	267.6	16.0
60°-70°	188.6	11.3
70°-80°	97.3	5.8
80°-90°	21.6	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°	459.5	27.5
0°-40°	778.5	46.5
0°-60°	1365.6	81.6
0°-90°	1673.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1673.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	544	544	544	544	544	
5°	538	547	543	545	550	51
15°	516	530	546	568	582	145
25°	472	497	543	596	623	217
35°	411	444	518	586	598	257
45°	337	373	448	451	441	260
55°	254	285	323	310	300	227
65°	169	188	204	192	185	167
75°	84	93	97	90	88	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°	544.0	544.0	544.0	544.0	544.0
2.5°	539.7	548.2	542.6	543.3	545.4
5°	537.6	546.8	542.6	545.4	550.4
7.5°	534.1	544.0	542.6	548.2	556.0
10°	529.1	540.5	544.0	553.9	562.4
12.5°	523.5	535.5	544.7	560.3	570.9
15°	515.7	530.5	546.1	568.0	582.2
17.5°	506.5	524.2	546.1	576.5	592.8
20°	495.9	516.4	546.1	583.6	603.4
22.5°	484.6	507.2	545.4	590.0	614.0
25°	471.8	497.3	543.3	596.3	623.2
27.5°	458.4	486.0	539.7	601.3	630.3
30°	443.5	473.2	534.8	603.4	632.4
32.5°	427.3	459.8	527.7	599.2	623.9
35°	411.0	444.2	518.5	585.7	597.7
37.5°	393.3	428.0	506.5	559.5	559.5
40°	374.9	410.3	491.6	523.5	521.4
42.5°	356.5	391.9	472.5	488.1	481.0
45°	337.4	372.8	447.8	451.3	440.7
47.5°	316.9	351.6	418.8	413.8	401.8
50°	296.4	330.4	386.2	377.7	365.7
52.5°	275.9	308.4	355.1	343.1	332.5
55°	254.0	285.1	323.3	309.8	299.9
57.5°	232.7	261.7	292.9	278.0	269.5
60°	211.5	237.7	262.4	248.3	240.5
62.5°	190.3	212.9	233.4	219.3	212.2
65°	169.1	188.2	204.4	191.7	185.3
67.5°	147.1	164.1	175.4	164.1	159.9
70°	125.9	139.4	147.8	137.9	134.4
72.5°	104.7	116.0	121.7	113.9	110.4
75°	84.2	92.7	96.9	89.8	87.7
77.5°	64.4	70.7	72.9	67.9	65.1
80°	46.7	50.2	51.6	48.1	46.7
82.5°	29.0	31.8	33.2	30.4	29.7
85°	15.6	17.0	17.0	17.0	16.3
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	19.59	21.20	19.95	21.52	21.83	20.10	21.72	20.47	22.03	22.34
	3H	21.16	22.61	21.54	22.94	23.30	21.57	23.02	21.95	23.35	23.71
	4H	21.70	23.06	22.09	23.41	23.79	22.06	23.43	22.46	23.78	24.15
	6H	22.04	23.30	22.45	23.67	24.06	22.36	23.63	22.78	23.99	24.38
	8H	22.12	23.33	22.55	23.72	24.12	22.44	23.64	22.86	24.03	24.43
	12H	22.16	23.32	22.59	23.70	24.13	22.47	23.63	22.90	24.01	24.44
4H	2H	20.34	21.71	20.74	22.06	22.43	20.74	22.11	21.14	22.46	22.83
	3H	22.11	23.25	22.52	23.65	24.05	22.41	23.55	22.82	23.95	24.35
	4H	22.76	23.79	23.19	24.20	24.64	23.00	24.03	23.43	24.44	24.88
	6H	23.21	24.10	23.66	24.54	25.00	23.40	24.29	23.85	24.74	25.19
	8H	23.31	24.15	23.78	24.60	25.06	23.50	24.34	23.96	24.78	25.24
	12H	23.38	24.13	23.86	24.60	25.07	23.56	24.31	24.04	24.79	25.26
8H	4H	23.04	23.88	23.51	24.32	24.79	23.26	24.10	23.72	24.54	25.01
	6H	23.58	24.28	24.08	24.77	25.24	23.74	24.44	24.24	24.93	25.40
	8H	23.74	24.37	24.25	24.87	25.36	23.89	24.51	24.40	25.02	25.50
	12H	23.85	24.40	24.35	24.89	25.45	23.99	24.54	24.50	25.03	25.59
12H	4H	23.06	23.81	23.54	24.29	24.76	23.28	24.03	23.76	24.50	24.97
	6H	23.61	24.24	24.12	24.74	25.23	23.77	24.39	24.28	24.90	25.39
	8H	23.82	24.37	24.32	24.86	25.42	23.96	24.51	24.47	25.00	25.56