

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: P1439823

Luminaire Tested: S123DR-S485D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439823  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2603-719-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DR-S485D830-X4F0-XX-UDD-FLB-W  
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

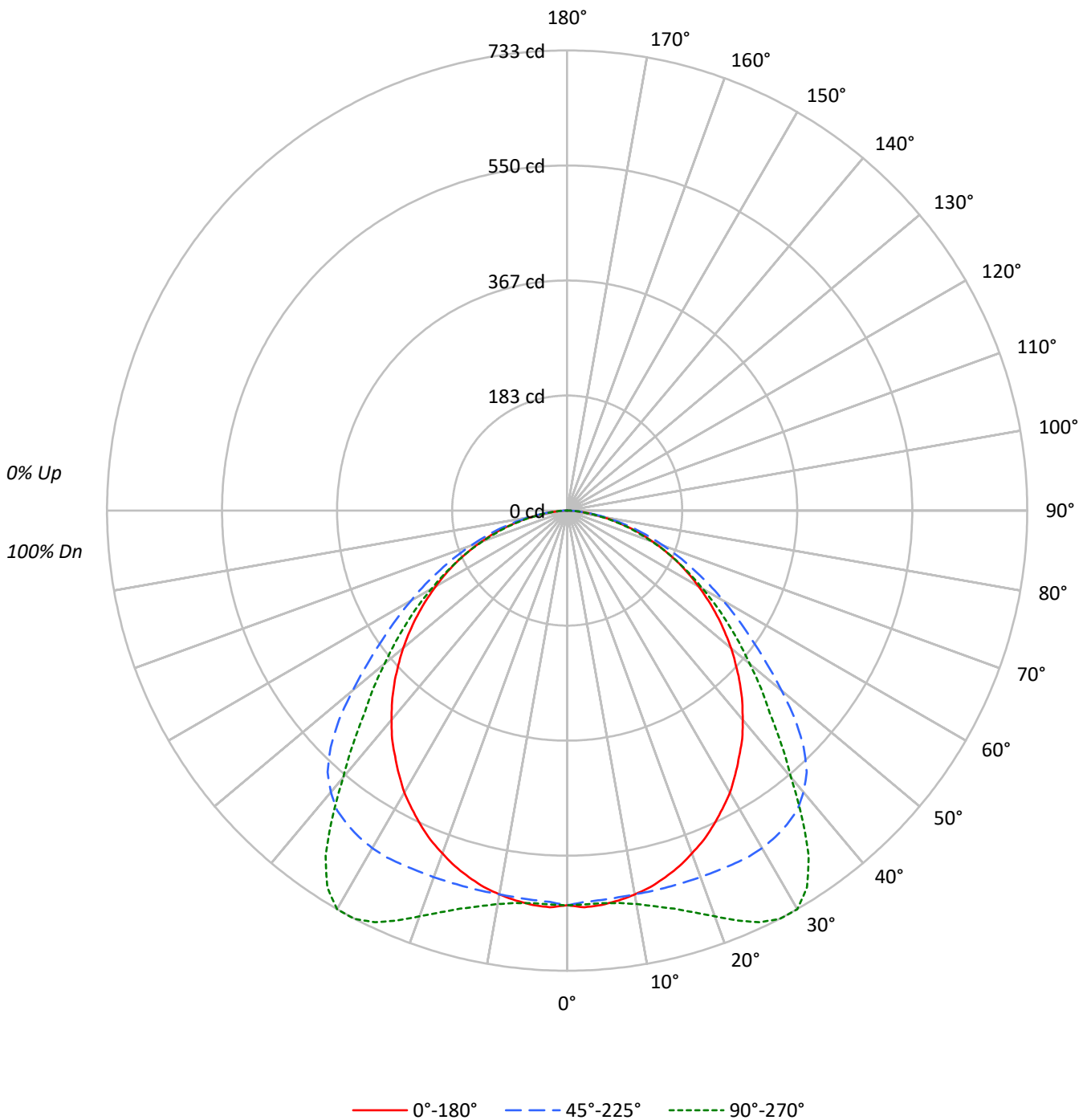
Lumens per Lamp: N/A  
Luminaire Lumens: 1901.3 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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

	0°	45°	90°
0°	7579	7579	7579
5°	7631	7536	7599
10°	7600	7600	7791
15°	7545	7749	8194
20°	7456	7973	8825
25°	7350	8276	9625
30°	7221	8642	10209
35°	7032	8984	9873
40°	6845	9218	8736
45°	6639	9088	7780
50°	6402	8363	7120
55°	6121	7569	6546
60°	5830	6928	6019
65°	5546	6342	5563
70°	5132	5753	5041
75°	4635	5119	4514
80°	3881	4291	3701
85°	2974	3154	2794

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 9088 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.8	3.1
10°-20°	177.9	9.4
20°-30°	291.5	15.3
30°-40°	368.7	19.4
40°-50°	360.2	18.9
50°-60°	295.9	15.6
60°-70°	208.7	11.0
70°-80°	111.3	5.9
80°-90°	27.1	1.4
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°	529.2	27.8
0°-40°	897.9	47.2
0°-60°	1554.1	81.7
0°-90°	1901.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1901.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	629	629	629	629	629	
5°	630	628	623	629	628	60
15°	604	608	621	649	656	170
25°	552	569	622	698	724	254
35°	478	511	610	681	671	299
45°	389	434	533	481	456	300
55°	291	335	360	324	311	260
65°	194	222	222	203	195	192
75°	100	112	110	100	97	106
85°	22	23	23	21	20	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	628.6	628.6	628.6	628.6	628.6
2.5°	632.5	630.5	624.0	629.9	627.9
5°	630.5	627.9	622.7	629.2	627.9
7.5°	626.6	625.3	621.4	631.2	630.5
10°	620.8	620.1	620.8	635.1	636.4
12.5°	614.3	614.9	620.8	640.9	645.5
15°	604.5	607.8	620.8	648.7	656.5
17.5°	594.1	599.3	620.8	659.1	670.8
20°	581.1	590.2	621.4	670.2	687.8
22.5°	568.1	579.2	621.4	685.2	706.6
25°	552.5	568.8	622.1	697.5	723.5
27.5°	535.6	555.1	622.7	707.3	733.3
30°	518.7	542.1	620.8	711.2	733.3
32.5°	498.6	527.2	616.9	704.7	711.2
35°	477.8	510.9	610.4	681.2	670.8
37.5°	458.3	493.4	601.9	638.3	613.6
40°	434.9	474.5	585.7	583.7	555.1
42.5°	412.8	454.4	564.9	528.5	505.1
45°	389.4	433.6	533.0	481.0	456.3
47.5°	364.7	410.8	492.7	436.2	418.6
50°	341.3	387.4	445.9	395.2	379.6
52.5°	315.9	362.7	401.1	358.8	345.2
55°	291.2	334.8	360.1	323.7	311.4
57.5°	266.5	307.5	322.4	290.6	280.8
60°	241.8	278.9	287.3	260.0	249.6
62.5°	217.8	252.2	254.8	230.8	221.7
65°	194.4	222.3	222.3	202.8	195.0
67.5°	169.7	193.7	192.4	174.2	169.7
70°	145.6	165.8	163.2	148.2	143.0
72.5°	122.9	137.8	135.9	124.2	118.3
75°	99.5	111.8	109.9	99.5	96.9
77.5°	77.4	85.8	83.9	76.7	74.8
80°	55.9	62.4	61.8	56.6	53.3
82.5°	37.7	41.0	40.3	37.1	35.1
85°	21.5	23.4	22.8	20.8	20.2
87.5°	8.5	9.8	10.4	9.8	9.1
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	18.68	20.28	19.04	20.59	20.91	18.40	20.01	18.77	20.32	20.64
	3H	20.25	21.69	20.62	22.02	22.38	19.92	21.36	20.29	21.69	22.05
	4H	20.80	22.16	21.20	22.50	22.88	20.45	21.81	20.85	22.16	22.54
	6H	21.16	22.42	21.57	22.79	23.18	20.81	22.07	21.22	22.43	22.83
	8H	21.26	22.46	21.69	22.85	23.25	20.91	22.11	21.33	22.50	22.89
	12H	21.32	22.47	21.75	22.85	23.28	20.96	22.11	21.39	22.49	22.92
4H	2H	19.31	20.67	19.71	21.02	21.40	19.10	20.46	19.50	20.81	21.18
	3H	21.12	22.26	21.53	22.65	23.05	20.82	21.95	21.23	22.35	22.75
	4H	21.81	22.83	22.24	23.25	23.68	21.45	22.48	21.89	22.89	23.33
	6H	22.29	23.18	22.75	23.62	24.08	21.91	22.81	22.37	23.25	23.70
	8H	22.42	23.26	22.89	23.70	24.17	22.04	22.88	22.50	23.32	23.78
	12H	22.51	23.26	22.99	23.73	24.20	22.12	22.87	22.60	23.35	23.82
8H	4H	22.07	22.91	22.54	23.35	23.82	21.76	22.60	22.22	23.04	23.50
	6H	22.67	23.36	23.16	23.85	24.32	22.32	23.01	22.82	23.50	23.98
	8H	22.86	23.48	23.37	23.99	24.47	22.50	23.12	23.01	23.63	24.12
	12H	23.00	23.55	23.51	24.04	24.60	22.63	23.18	23.14	23.67	24.23
12H	4H	22.09	22.84	22.57	23.32	23.79	21.79	22.54	22.27	23.01	23.48
	6H	22.70	23.32	23.21	23.83	24.31	22.37	22.99	22.88	23.50	23.98
	8H	22.94	23.49	23.45	23.98	24.54	22.60	23.15	23.10	23.64	24.20