

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: P1439651

Luminaire Tested: S122DR-H485D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439651  
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-H485D950-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

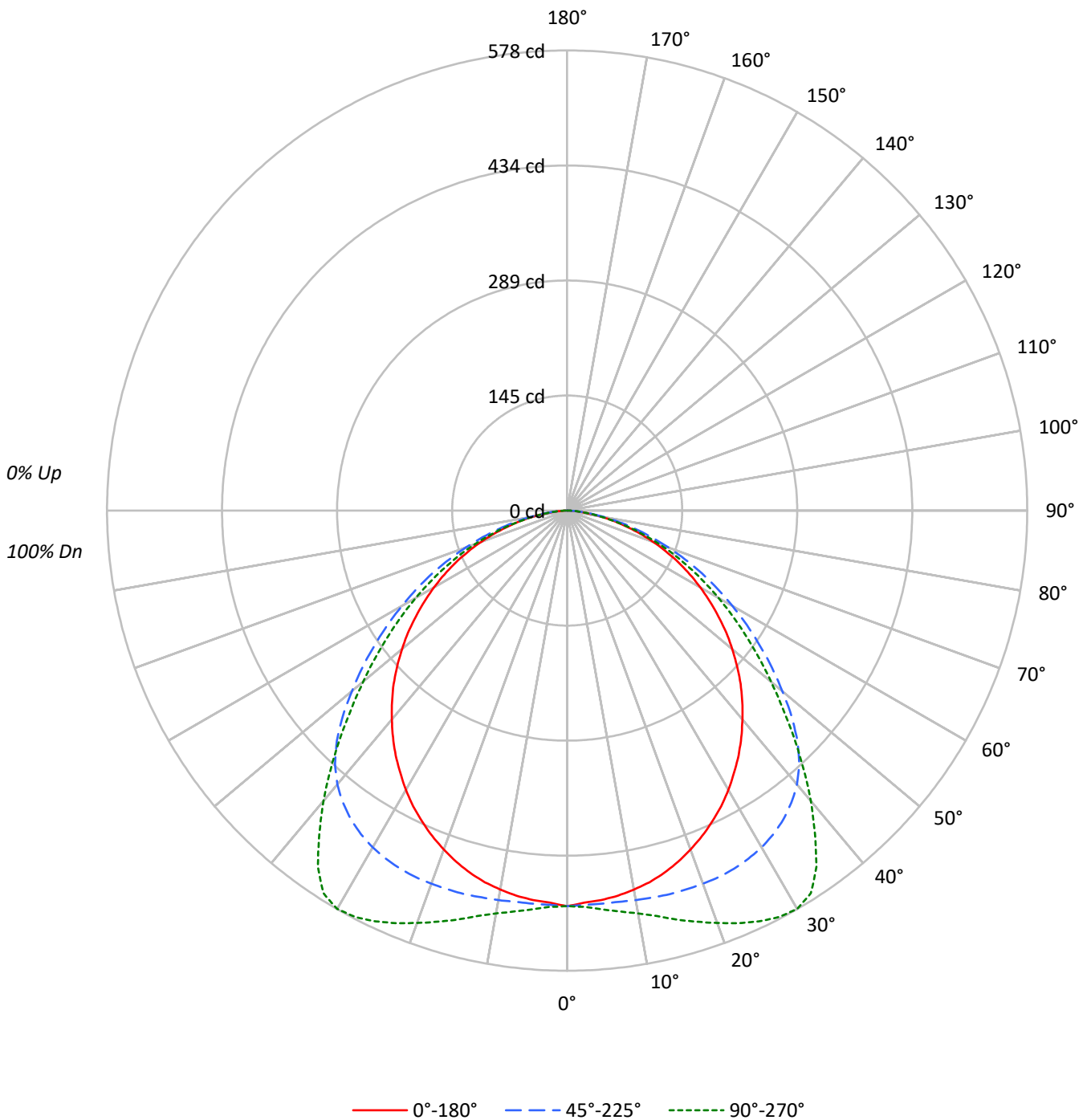
Lumens per Lamp: N/A  
Luminaire Lumens: 1528.3 lumens  
Efficiency: N/A  
Efficacy: 88.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 17.3  
Input Voltage (V): 120  
Input Current (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	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°	9414	9414	9414
5°	9340	9425	9560
10°	9298	9559	9883
15°	9240	9784	10431
20°	9133	10057	11113
25°	9010	10375	11901
30°	8864	10687	12638
35°	8682	10954	12628
40°	8471	11107	11777
45°	8258	10959	10787
50°	7979	10399	9847
55°	7663	9754	9051
60°	7321	9083	8325
65°	6922	8370	7590
70°	6370	7484	6802
75°	5629	6478	5863
80°	4648	5150	4648
85°	3087	3369	3239

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 11047 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.5	3.1
10°-20°	141.9	9.3
20°-30°	230.3	15.1
30°-40°	291.4	19.1
40°-50°	291.8	19.1
50°-60°	244.4	16.0
60°-70°	172.3	11.3
70°-80°	88.9	5.8
80°-90°	19.7	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°	419.8	27.5
0°-40°	711.2	46.5
0°-60°	1247.4	81.6
0°-90°	1528.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1528.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	497	497	497	497	497	
5°	491	500	496	498	503	47
15°	471	485	499	519	532	133
25°	431	454	496	545	569	199
35°	375	406	474	535	546	235
45°	308	340	409	412	403	237
55°	232	260	295	283	274	208
65°	154	172	187	175	169	153
75°	77	85	88	82	80	82
85°	14	16	16	16	15	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	496.9	496.9	496.9	496.9	496.9
2.5°	493.0	500.8	495.6	496.3	498.2
5°	491.1	499.5	495.6	498.2	502.7
7.5°	487.9	496.9	495.6	500.8	507.9
10°	483.3	493.7	496.9	506.0	513.7
12.5°	478.2	489.2	497.6	511.8	521.5
15°	471.1	484.6	498.8	518.9	531.8
17.5°	462.7	478.8	498.8	526.6	541.5
20°	453.0	471.7	498.8	533.1	551.2
22.5°	442.6	463.3	498.2	538.9	560.9
25°	431.0	454.3	496.3	544.7	569.3
27.5°	418.7	443.9	493.0	549.2	575.7
30°	405.2	432.3	488.5	551.2	577.7
32.5°	390.3	420.0	482.0	547.3	569.9
35°	375.4	405.8	473.6	535.0	546.0
37.5°	359.3	390.9	462.7	511.1	511.1
40°	342.5	374.8	449.1	478.2	476.2
42.5°	325.7	358.0	431.6	445.9	439.4
45°	308.2	340.5	409.0	412.3	402.6
47.5°	289.5	321.1	382.5	378.0	367.0
50°	270.7	301.8	352.8	345.1	334.1
52.5°	252.0	281.7	324.4	313.4	303.7
55°	232.0	260.4	295.3	283.0	274.0
57.5°	212.6	239.1	267.5	253.9	246.2
60°	193.2	217.1	239.7	226.8	219.7
62.5°	173.8	194.5	213.2	200.3	193.9
65°	154.4	171.9	186.7	175.1	169.3
67.5°	134.4	149.9	160.3	149.9	146.0
70°	115.0	127.3	135.1	126.0	122.8
72.5°	95.6	106.0	111.1	104.0	100.8
75°	76.9	84.6	88.5	82.1	80.1
77.5°	58.8	64.6	66.6	62.0	59.4
80°	42.6	45.9	47.2	43.9	42.6
82.5°	26.5	29.1	30.4	27.8	27.1
85°	14.2	15.5	15.5	15.5	14.9
87.5°	5.2	6.5	6.5	6.5	5.8
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	19.28	20.89	19.64	21.20	21.52	19.79	21.40	20.15	21.71	22.03
	3H	20.85	22.30	21.22	22.63	22.99	21.26	22.71	21.63	23.04	23.40
	4H	21.38	22.75	21.78	23.10	23.47	21.75	23.11	22.15	23.46	23.84
	6H	21.73	22.99	22.14	23.35	23.75	22.05	23.31	22.46	23.68	24.07
	8H	21.81	23.01	22.23	23.40	23.80	22.12	23.33	22.55	23.72	24.12
	12H	21.84	23.00	22.27	23.38	23.81	22.16	23.31	22.59	23.69	24.12
4H	2H	20.03	21.40	20.43	21.74	22.12	20.43	21.79	20.82	22.14	22.52
	3H	21.80	22.94	22.21	23.34	23.74	22.09	23.23	22.50	23.63	24.03
	4H	22.45	23.48	22.88	23.89	24.33	22.69	23.71	23.12	24.13	24.56
	6H	22.89	23.79	23.35	24.23	24.68	23.08	23.98	23.54	24.42	24.88
	8H	23.00	23.84	23.46	24.28	24.75	23.18	24.02	23.64	24.46	24.93
	12H	23.06	23.81	23.54	24.29	24.76	23.24	23.99	23.72	24.47	24.94
8H	4H	22.73	23.57	23.19	24.01	24.48	22.95	23.78	23.41	24.23	24.69
	6H	23.27	23.96	23.76	24.45	24.93	23.43	24.12	23.92	24.61	25.09
	8H	23.43	24.05	23.94	24.56	25.04	23.57	24.20	24.08	24.70	25.19
	12H	23.53	24.08	24.04	24.57	25.14	23.67	24.22	24.18	24.71	25.28
12H	4H	22.75	23.50	23.23	23.97	24.44	22.96	23.71	23.44	24.19	24.66
	6H	23.30	23.92	23.81	24.43	24.92	23.46	24.08	23.97	24.59	25.07
	8H	23.50	24.05	24.01	24.54	25.11	23.64	24.19	24.15	24.69	25.25