

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: P1439966

Luminaire Tested: S124DR-S485D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439966  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DR-S485D950-X4F0-XX-UDD-FLB-W  
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

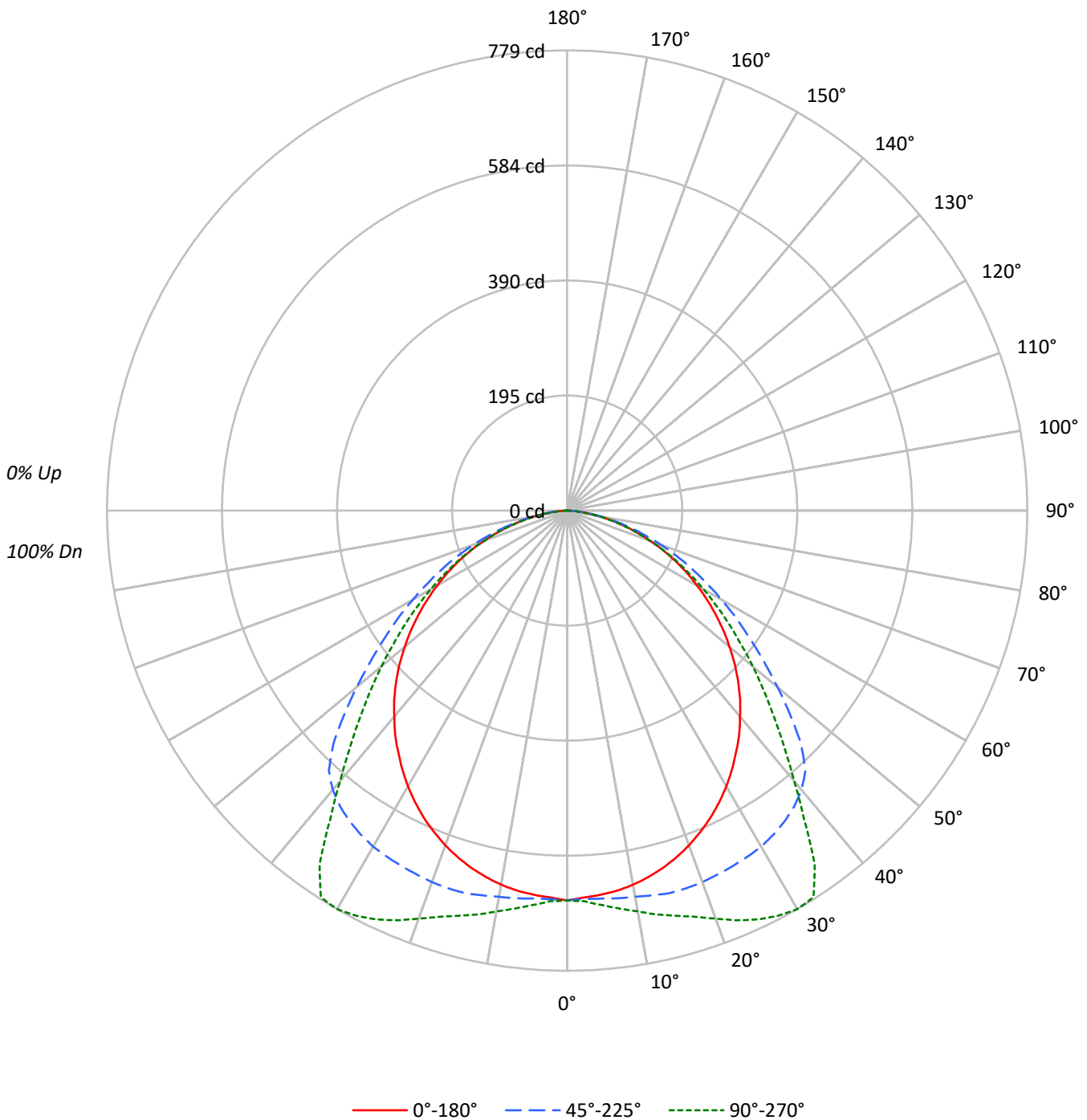
Lumens per Lamp: N/A  
Luminaire Lumens: 2005.8 lumens  
Efficiency: N/A  
Efficacy: 105.0 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct

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	103	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	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°	5835	5835	5835
5°	5795	5852	5950
10°	5775	5960	6187
15°	5733	6136	6498
20°	5674	6295	6916
25°	5599	6477	7449
30°	5502	6705	7955
35°	5383	6928	7886
40°	5255	7125	6900
45°	5118	7006	6203
50°	4935	6396	5639
55°	4732	5821	5152
60°	4500	5337	4720
65°	4228	4864	4310
70°	3867	4353	3852
75°	3406	3741	3341
80°	2805	2999	2704
85°	1968	2039	1836

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 7006 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.3	3.2
10°-20°	189.8	9.5
20°-30°	308.9	15.4
30°-40°	392.3	19.6
40°-50°	382.3	19.1
50°-60°	313.4	15.6
60°-70°	218.7	10.9
70°-80°	112.2	5.6
80°-90°	24.9	1.2
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°	562.0	28.0
0°-40°	954.3	47.6
0°-60°	1650.0	82.3
0°-90°	2005.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2005.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	653	663	659	664	670	62
15°	626	646	670	697	710	177
25°	574	611	664	732	764	264
35°	499	547	642	735	731	312
45°	409	460	560	514	496	315
55°	307	354	378	346	334	274
65°	202	231	232	214	206	200
75°	100	111	110	102	98	106
85°	19	20	20	19	18	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	660.0	660.0	660.0	660.0	660.0
2.5°	655.5	663.9	658.1	660.7	661.9
5°	652.9	662.6	659.4	663.9	670.4
7.5°	649.0	660.0	661.9	671.0	679.4
10°	643.2	656.1	663.9	679.4	689.1
12.5°	635.4	651.6	667.1	688.5	700.2
15°	626.3	645.8	670.4	696.9	709.9
17.5°	615.3	638.6	670.4	703.4	720.9
20°	603.0	630.2	669.1	711.8	735.1
22.5°	588.8	621.1	666.5	721.5	750.7
25°	573.9	610.8	663.9	732.5	763.6
27.5°	557.0	598.5	660.7	741.0	773.3
30°	538.9	583.6	656.8	744.9	779.2
32.5°	519.5	566.1	650.3	744.9	775.9
35°	498.7	547.3	641.9	735.1	730.6
37.5°	478.6	527.2	631.5	687.9	659.4
40°	455.3	505.9	617.3	621.1	597.8
42.5°	433.3	483.2	597.2	564.8	544.1
45°	409.3	459.9	560.3	513.6	496.1
47.5°	384.7	434.6	512.3	467.6	451.4
50°	358.8	409.3	465.0	424.2	410.0
52.5°	333.6	382.1	419.7	384.1	370.5
55°	307.0	354.3	377.6	345.9	334.2
57.5°	280.5	325.8	339.4	310.2	299.2
60°	254.5	295.3	301.8	276.6	266.9
62.5°	228.6	263.6	266.2	244.2	235.8
65°	202.1	231.2	232.5	213.7	206.0
67.5°	176.2	200.1	200.1	183.9	177.5
70°	149.6	169.7	168.4	155.4	149.0
72.5°	124.4	138.6	137.3	127.6	123.1
75°	99.7	110.8	109.5	101.7	97.8
77.5°	76.4	84.2	82.9	77.7	74.5
80°	55.1	59.6	58.9	55.1	53.1
82.5°	36.3	38.9	37.6	35.0	33.7
85°	19.4	20.1	20.1	18.8	18.1
87.5°	7.1	7.1	7.1	7.1	6.5
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	17.81	19.41	18.18	19.73	20.04	17.60	19.20	17.96	19.51	19.82
	3H	19.32	20.76	19.69	21.08	21.44	19.07	20.51	19.44	20.83	21.19
	4H	19.82	21.17	20.22	21.52	21.90	19.56	20.92	19.96	21.26	21.64
	6H	20.14	21.39	20.55	21.76	22.15	19.88	21.13	20.29	21.50	21.89
	8H	20.22	21.42	20.65	21.81	22.21	19.96	21.15	20.38	21.54	21.94
	12H	20.26	21.41	20.69	21.79	22.22	19.99	21.13	20.42	21.52	21.95
4H	2H	18.43	19.79	18.83	20.14	20.51	18.26	19.62	18.66	19.97	20.34
	3H	20.16	21.29	20.57	21.69	22.09	19.93	21.06	20.34	21.46	21.86
	4H	20.79	21.81	21.22	22.22	22.66	20.53	21.55	20.96	21.96	22.40
	6H	21.22	22.11	21.68	22.55	23.00	20.94	21.83	21.40	22.27	22.73
	8H	21.33	22.16	21.79	22.60	23.07	21.05	21.87	21.51	22.32	22.78
	12H	21.40	22.14	21.88	22.62	23.09	21.10	21.85	21.58	22.32	22.79
8H	4H	21.03	21.86	21.50	22.31	22.77	20.80	21.63	21.26	22.07	22.54
	6H	21.56	22.24	22.05	22.73	23.21	21.30	21.99	21.80	22.48	22.95
	8H	21.72	22.34	22.23	22.85	23.33	21.45	22.07	21.96	22.57	23.06
	12H	21.83	22.38	22.34	22.87	23.43	21.55	22.09	22.06	22.58	23.15
12H	4H	21.05	21.79	21.53	22.26	22.73	20.82	21.56	21.30	22.04	22.51
	6H	21.58	22.20	22.09	22.70	23.19	21.33	21.95	21.84	22.46	22.94
	8H	21.79	22.33	22.30	22.82	23.39	21.53	22.07	22.03	22.56	23.12