

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: P1439958

Luminaire Tested: S124DR-S485D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439958
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-S485D830-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

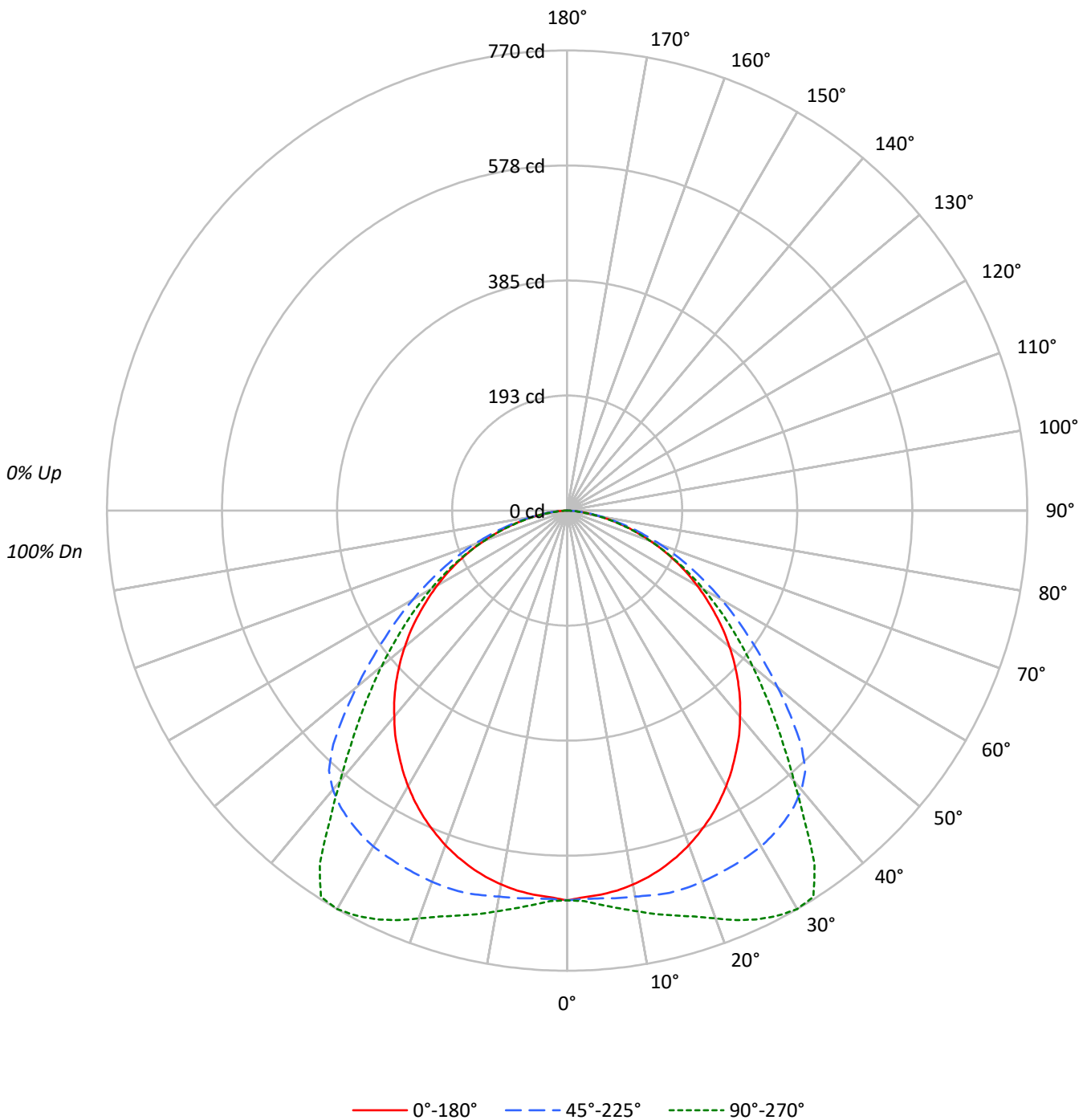
Lumens per Lamp: N/A
Luminaire Lumens: 1981.7 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	67	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°	5765	5765	5765
5°	5724	5781	5878
10°	5704	5889	6113
15°	5664	6062	6419
20°	5606	6219	6834
25°	5531	6399	7360
30°	5435	6625	7859
35°	5318	6845	7791
40°	5193	7038	6816
45°	5056	6921	6129
50°	4876	6320	5572
55°	4675	5751	5090
60°	4447	5273	4661
65°	4178	4805	4257
70°	3821	4302	3805
75°	3365	3693	3300
80°	2770	2963	2673
85°	1948	2009	1816

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 6921 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.6	3.2
10°-20°	187.5	9.5
20°-30°	305.2	15.4
30°-40°	387.6	19.6
40°-50°	377.7	19.1
50°-60°	309.6	15.6
60°-70°	216.0	10.9
70°-80°	110.9	5.6
80°-90°	24.6	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°	555.3	28.0
0°-40°	942.9	47.6
0°-60°	1630.2	82.3
0°-90°	1981.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1981.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	652	652	652	652	652	
5°	645	655	651	656	662	61
15°	619	638	662	689	701	174
25°	567	603	656	724	754	261
35°	493	541	634	726	722	308
45°	404	454	554	508	490	312
55°	303	350	373	342	330	271
65°	200	228	230	211	204	198
75°	98	109	108	100	97	105
85°	19	20	20	19	18	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	652.1	652.1	652.1	652.1	652.1
2.5°	647.6	655.9	650.2	652.7	654.0
5°	645.0	654.6	651.4	655.9	662.3
7.5°	641.2	652.1	654.0	663.0	671.3
10°	635.4	648.2	655.9	671.3	680.9
12.5°	627.8	643.8	659.1	680.2	691.8
15°	618.8	638.0	662.3	688.6	701.3
17.5°	607.9	631.0	662.3	695.0	712.2
20°	595.8	622.6	661.0	703.3	726.3
22.5°	581.7	613.7	658.5	712.9	741.7
25°	567.0	603.4	655.9	723.7	754.5
27.5°	550.3	591.3	652.7	732.1	764.1
30°	532.4	576.6	648.9	735.9	769.8
32.5°	513.2	559.3	642.5	735.9	766.6
35°	492.7	540.7	634.2	726.3	721.8
37.5°	472.9	520.9	623.9	679.6	651.4
40°	449.9	499.8	609.8	613.7	590.6
42.5°	428.1	477.4	590.0	558.0	537.5
45°	404.4	454.3	553.5	507.5	490.2
47.5°	380.1	429.4	506.2	462.0	446.0
50°	354.5	404.4	459.5	419.1	405.1
52.5°	329.6	377.6	414.7	379.5	366.0
55°	303.3	350.0	373.1	341.7	330.2
57.5°	277.1	321.9	335.3	306.5	295.6
60°	251.5	291.8	298.2	273.2	263.6
62.5°	225.9	260.4	263.0	241.2	232.9
65°	199.7	228.5	229.7	211.2	203.5
67.5°	174.1	197.7	197.7	181.7	175.3
70°	147.8	167.7	166.4	153.6	147.2
72.5°	122.9	136.9	135.7	126.1	121.6
75°	98.5	109.4	108.1	100.5	96.6
77.5°	75.5	83.2	81.9	76.8	73.6
80°	54.4	58.9	58.2	54.4	52.5
82.5°	35.8	38.4	37.1	34.6	33.3
85°	19.2	19.8	19.8	18.6	17.9
87.5°	7.0	7.0	7.0	7.0	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	17.77	19.37	18.14	19.68	20.00	17.55	19.15	17.92	19.47	19.78
	3H	19.27	20.71	19.65	21.04	21.40	19.03	20.47	19.40	20.79	21.15
	4H	19.78	21.13	20.18	21.48	21.85	19.52	20.88	19.92	21.22	21.60
	6H	20.10	21.35	20.51	21.71	22.11	19.84	21.09	20.25	21.46	21.85
	8H	20.18	21.37	20.61	21.76	22.16	19.91	21.11	20.34	21.50	21.90
	12H	20.22	21.36	20.65	21.74	22.17	19.95	21.09	20.38	21.47	21.90
4H	2H	18.39	19.75	18.79	20.09	20.47	18.22	19.58	18.62	19.92	20.30
	3H	20.12	21.25	20.53	21.65	22.05	19.89	21.02	20.30	21.42	21.82
	4H	20.75	21.77	21.18	22.18	22.62	20.49	21.50	20.92	21.92	22.36
	6H	21.18	22.06	21.63	22.50	22.96	20.90	21.79	21.36	22.23	22.68
	8H	21.29	22.12	21.75	22.56	23.03	21.00	21.83	21.47	22.27	22.74
	12H	21.36	22.10	21.84	22.57	23.04	21.06	21.80	21.54	22.28	22.75
8H	4H	20.99	21.82	21.45	22.26	22.73	20.76	21.59	21.22	22.03	22.50
	6H	21.52	22.20	22.01	22.69	23.17	21.26	21.95	21.76	22.44	22.91
	8H	21.68	22.30	22.19	22.80	23.29	21.41	22.02	21.92	22.53	23.02
	12H	21.79	22.33	22.30	22.82	23.39	21.51	22.05	22.02	22.54	23.11
12H	4H	21.00	21.75	21.48	22.22	22.69	20.78	21.52	21.26	22.00	22.47
	6H	21.54	22.15	22.05	22.66	23.15	21.29	21.91	21.80	22.41	22.90
	8H	21.75	22.29	22.25	22.78	23.34	21.48	22.03	21.99	22.52	23.08