

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: P1439918

Luminaire Tested: S124DR-H485D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439918
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-H485D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

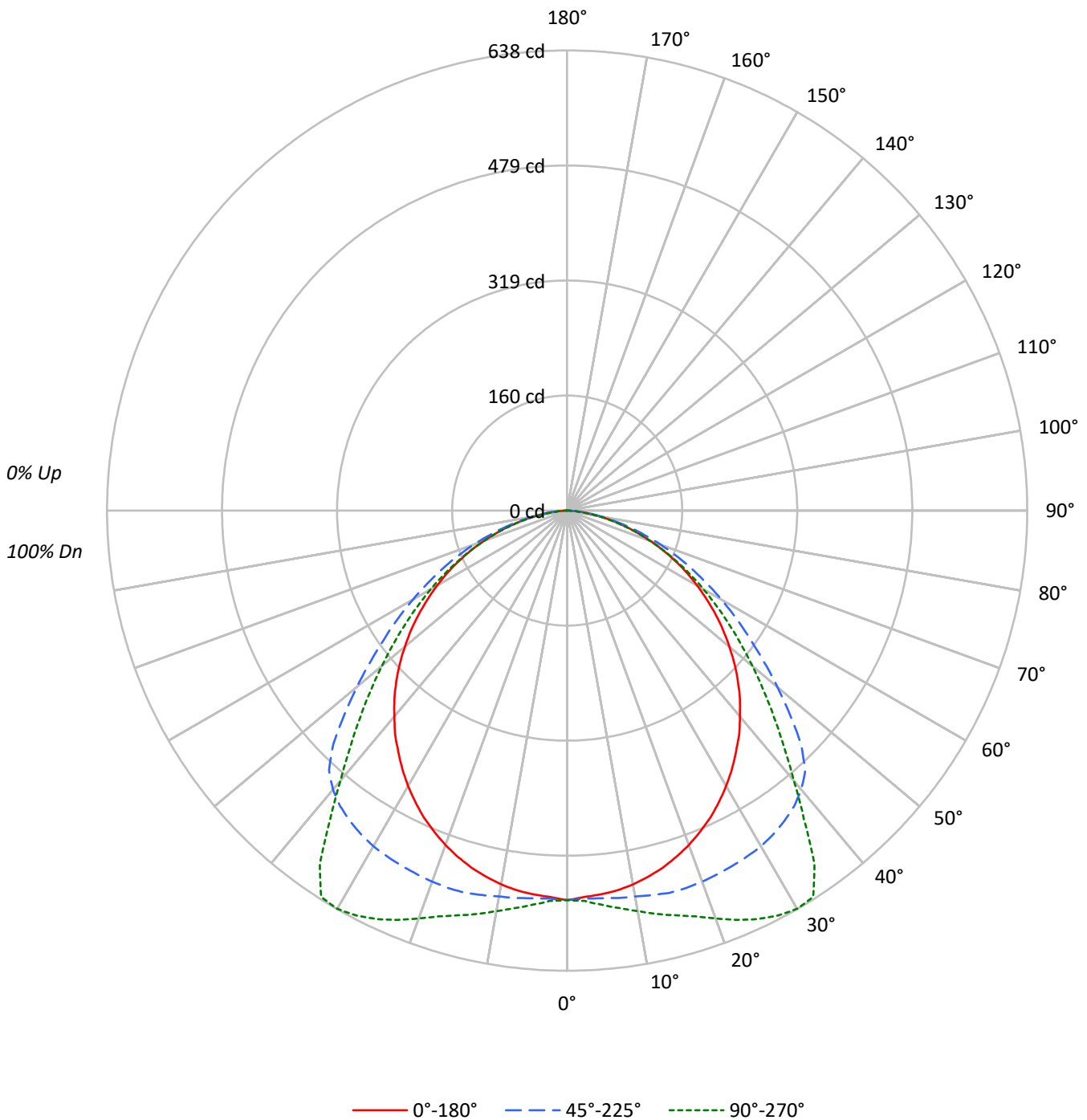
Lumens per Lamp: N/A
Luminaire Lumens: 1641.3 lumens
Efficiency: N/A
Efficacy: 94.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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	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°	4775	4775	4775
5°	4741	4788	4869
10°	4725	4878	5063
15°	4691	5021	5317
20°	4642	5151	5660
25°	4581	5300	6096
30°	4502	5486	6509
35°	4405	5669	6452
40°	4300	5830	5646
45°	4189	5733	5076
50°	4038	5234	4615
55°	3872	4763	4216
60°	3683	4368	3862
65°	3460	3981	3525
70°	3164	3562	3151
75°	2787	3061	2733
80°	2296	2454	2215
85°	1613	1664	1501

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5733 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.8	3.2
10°-20°	155.3	9.5
20°-30°	252.8	15.4
30°-40°	321.0	19.6
40°-50°	312.8	19.1
50°-60°	256.5	15.6
60°-70°	178.9	10.9
70°-80°	91.8	5.6
80°-90°	20.4	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°	459.9	28.0
0°-40°	780.9	47.6
0°-60°	1350.2	82.3
0°-90°	1641.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1641.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	540	540	540	540	540	
5°	534	542	540	543	549	51
15°	512	528	549	570	581	145
25°	470	500	543	599	625	216
35°	408	448	525	602	598	255
45°	335	376	458	420	406	258
55°	251	290	309	283	274	225
65°	165	189	190	175	168	164
75°	82	91	90	83	80	87
85°	16	16	16	15	15	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	540.1	540.1	540.1	540.1	540.1
2.5°	536.4	543.3	538.5	540.6	541.7
5°	534.2	542.2	539.5	543.3	548.6
7.5°	531.1	540.1	541.7	549.1	556.0
10°	526.3	536.9	543.3	556.0	563.9
12.5°	519.9	533.2	545.9	563.4	572.9
15°	512.5	528.4	548.6	570.3	580.9
17.5°	503.5	522.6	548.6	575.6	589.9
20°	493.4	515.7	547.5	582.5	601.6
22.5°	481.8	508.3	545.4	590.4	614.3
25°	469.6	499.8	543.3	599.4	624.9
27.5°	455.8	489.7	540.6	606.3	632.8
30°	441.0	477.5	537.4	609.5	637.6
32.5°	425.1	463.2	532.1	609.5	634.9
35°	408.1	447.9	525.2	601.6	597.8
37.5°	391.7	431.4	516.8	562.9	539.5
40°	372.6	413.9	505.1	508.3	489.2
42.5°	354.6	395.4	488.7	462.2	445.2
45°	335.0	376.3	458.5	420.3	406.0
47.5°	314.8	355.6	419.2	382.7	369.4
50°	293.6	335.0	380.5	347.2	335.5
52.5°	273.0	312.7	343.4	314.3	303.2
55°	251.2	289.9	309.0	283.0	273.5
57.5°	229.5	266.6	277.7	253.9	244.9
60°	208.3	241.7	247.0	226.3	218.4
62.5°	187.1	215.7	217.8	199.8	192.9
65°	165.4	189.2	190.3	174.9	168.5
67.5°	144.2	163.8	163.8	150.5	145.2
70°	122.4	138.9	137.8	127.2	121.9
72.5°	101.8	113.4	112.4	104.4	100.7
75°	81.6	90.6	89.6	83.2	80.0
77.5°	62.5	68.9	67.8	63.6	61.0
80°	45.1	48.8	48.2	45.1	43.5
82.5°	29.7	31.8	30.7	28.6	27.6
85°	15.9	16.4	16.4	15.4	14.8
87.5°	5.8	5.8	5.8	5.8	5.3
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	17.12	18.72	17.48	19.03	19.34	16.90	18.50	17.27	18.81	19.13
	3H	18.62	20.06	19.00	20.39	20.75	18.37	19.81	18.75	20.14	20.50
	4H	19.12	20.48	19.52	20.82	21.20	18.87	20.22	19.27	20.57	20.95
	6H	19.44	20.70	19.85	21.06	21.45	19.18	20.44	19.60	20.80	21.19
	8H	19.53	20.72	19.95	21.11	21.51	19.26	20.45	19.69	20.84	21.24
	12H	19.57	20.71	19.99	21.09	21.52	19.30	20.44	19.72	20.82	21.25
4H	2H	17.74	19.09	18.14	19.44	19.82	17.57	18.92	17.97	19.27	19.65
	3H	19.47	20.60	19.88	20.99	21.39	19.24	20.36	19.65	20.76	21.16
	4H	20.10	21.11	20.53	21.53	21.96	19.83	20.85	20.26	21.26	21.70
	6H	20.52	21.41	20.98	21.85	22.31	20.25	21.13	20.70	21.57	22.03
	8H	20.64	21.46	21.10	21.91	22.37	20.35	21.18	20.81	21.62	22.09
	12H	20.70	21.44	21.18	21.92	22.39	20.41	21.15	20.89	21.63	22.10
8H	4H	20.34	21.17	20.80	21.61	22.07	20.11	20.93	20.57	21.38	21.84
	6H	20.86	21.55	21.36	22.04	22.51	20.61	21.29	21.10	21.78	22.26
	8H	21.03	21.64	21.54	22.15	22.64	20.75	21.37	21.27	21.88	22.36
	12H	21.14	21.68	21.64	22.17	22.73	20.85	21.40	21.36	21.89	22.45
12H	4H	20.35	21.09	20.83	21.57	22.04	20.12	20.87	20.60	21.34	21.81
	6H	20.88	21.50	21.39	22.01	22.49	20.64	21.25	21.15	21.76	22.25
	8H	21.09	21.64	21.60	22.13	22.69	20.83	21.37	21.34	21.86	22.43