

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: P1439927

Luminaire Tested: S124DR-H675D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439927
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-H675D930-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

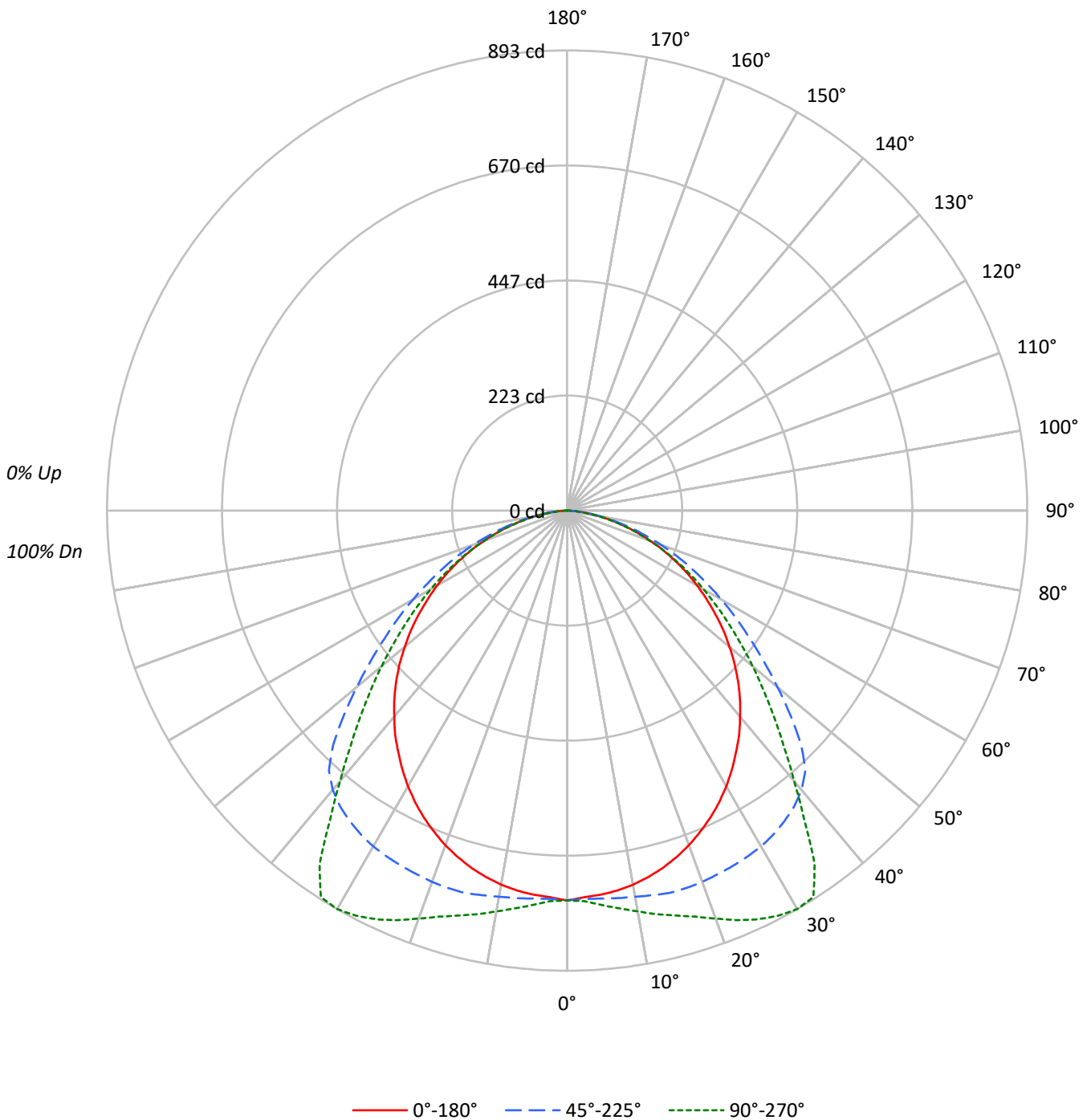
Lumens per Lamp: N/A
Luminaire Lumens: 2298.7 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (A_{in}): 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°	6688	6688	6688
5°	6640	6706	6818
10°	6618	6830	7091
15°	6570	7032	7446
20°	6501	7215	7927
25°	6415	7422	8537
30°	6305	7684	9116
35°	6168	7940	9037
40°	6022	8165	7907
45°	5865	8029	7110
50°	5656	7330	6463
55°	5423	6670	5904
60°	5158	6116	5407
65°	4845	5575	4937
70°	4433	4989	4413
75°	3905	4284	3829
80°	3213	3437	3101
85°	2262	2333	2110

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8029 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.6	3.2
10°-20°	217.5	9.5
20°-30°	354.0	15.4
30°-40°	449.6	19.6
40°-50°	438.1	19.1
50°-60°	359.2	15.6
60°-70°	250.6	10.9
70°-80°	128.6	5.6
80°-90°	28.5	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°	644.1	28.0
0°-40°	1093.7	47.6
0°-60°	1890.9	82.3
0°-90°	2298.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2298.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	748	759	756	761	768	71
15°	718	740	768	799	814	202
25°	658	700	761	840	875	303
35°	572	627	736	842	837	358
45°	469	527	642	589	569	361
55°	352	406	433	396	383	315
65°	232	265	266	245	236	229
75°	114	127	125	116	112	122
85°	22	23	23	22	21	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	756.4	756.4	756.4	756.4	756.4
2.5°	751.2	760.8	754.1	757.1	758.6
5°	748.2	759.3	755.6	760.8	768.2
7.5°	743.7	756.4	758.6	769.0	778.6
10°	737.1	751.9	760.8	778.6	789.8
12.5°	728.2	746.7	764.5	789.0	802.4
15°	717.8	740.0	768.2	798.7	813.5
17.5°	705.1	731.9	768.2	806.1	826.1
20°	691.0	722.2	766.8	815.7	842.5
22.5°	674.7	711.8	763.8	826.9	860.3
25°	657.6	700.0	760.8	839.5	875.1
27.5°	638.3	685.9	757.1	849.1	886.3
30°	617.6	668.8	752.7	853.6	892.9
32.5°	595.3	648.7	745.2	853.6	889.2
35°	571.5	627.2	735.6	842.5	837.3
37.5°	548.5	604.2	723.7	788.3	755.6
40°	521.8	579.7	707.4	711.8	685.1
42.5°	496.6	553.7	684.4	647.3	623.5
45°	469.1	527.0	642.1	588.6	568.6
47.5°	440.9	498.1	587.1	535.9	517.4
50°	411.2	469.1	532.9	486.2	469.9
52.5°	382.3	437.9	481.0	440.2	424.6
55°	351.8	406.0	432.7	396.4	383.0
57.5°	321.4	373.4	388.9	355.5	342.9
60°	291.7	338.5	345.9	316.9	305.8
62.5°	262.0	302.1	305.1	279.8	270.2
65°	231.6	265.0	266.5	244.9	236.0
67.5°	201.9	229.4	229.4	210.8	203.4
70°	171.5	194.5	193.0	178.1	170.7
72.5°	142.5	158.8	157.4	146.2	141.0
75°	114.3	126.9	125.4	116.5	112.1
77.5°	87.6	96.5	95.0	89.1	85.4
80°	63.1	68.3	67.5	63.1	60.9
82.5°	41.6	44.5	43.1	40.1	38.6
85°	22.3	23.0	23.0	21.5	20.8
87.5°	8.2	8.2	8.2	8.2	7.4
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	18.29	19.89	18.65	20.20	20.51	18.07	19.67	18.43	19.98	20.30
	3H	19.79	21.23	20.17	21.56	21.92	19.54	20.98	19.92	21.31	21.67
	4H	20.29	21.65	20.69	21.99	22.37	20.04	21.39	20.44	21.74	22.11
	6H	20.61	21.87	21.02	22.23	22.62	20.35	21.61	20.77	21.97	22.36
	8H	20.70	21.89	21.12	22.28	22.68	20.43	21.62	20.85	22.01	22.41
	12H	20.74	21.88	21.17	22.26	22.69	20.46	21.61	20.89	21.99	22.42
4H	2H	18.91	20.26	19.31	20.61	20.99	18.74	20.09	19.14	20.44	20.82
	3H	20.64	21.77	21.05	22.16	22.56	20.41	21.53	20.82	21.93	22.33
	4H	21.27	22.28	21.70	22.70	23.13	21.00	22.02	21.43	22.43	22.87
	6H	21.69	22.58	22.15	23.02	23.48	21.42	22.30	21.87	22.74	23.20
	8H	21.81	22.63	22.27	23.08	23.54	21.52	22.35	21.98	22.79	23.26
	12H	21.87	22.61	22.35	23.09	23.56	21.58	22.32	22.06	22.80	23.27
8H	4H	21.51	22.34	21.97	22.78	23.24	21.27	22.10	21.74	22.55	23.01
	6H	22.03	22.72	22.53	23.21	23.68	21.78	22.46	22.27	22.95	23.43
	8H	22.20	22.81	22.71	23.32	23.81	21.92	22.54	22.44	23.05	23.53
	12H	22.31	22.85	22.81	23.34	23.90	22.02	22.57	22.53	23.06	23.62
12H	4H	21.52	22.26	22.00	22.74	23.21	21.29	22.03	21.77	22.51	22.98
	6H	22.05	22.67	22.56	23.18	23.66	21.81	22.42	22.32	22.93	23.42
	8H	22.26	22.81	22.77	23.30	23.86	22.00	22.54	22.51	23.03	23.60