

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: P1439970

Luminaire Tested: S124DR-S675D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439970
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-S675D850-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

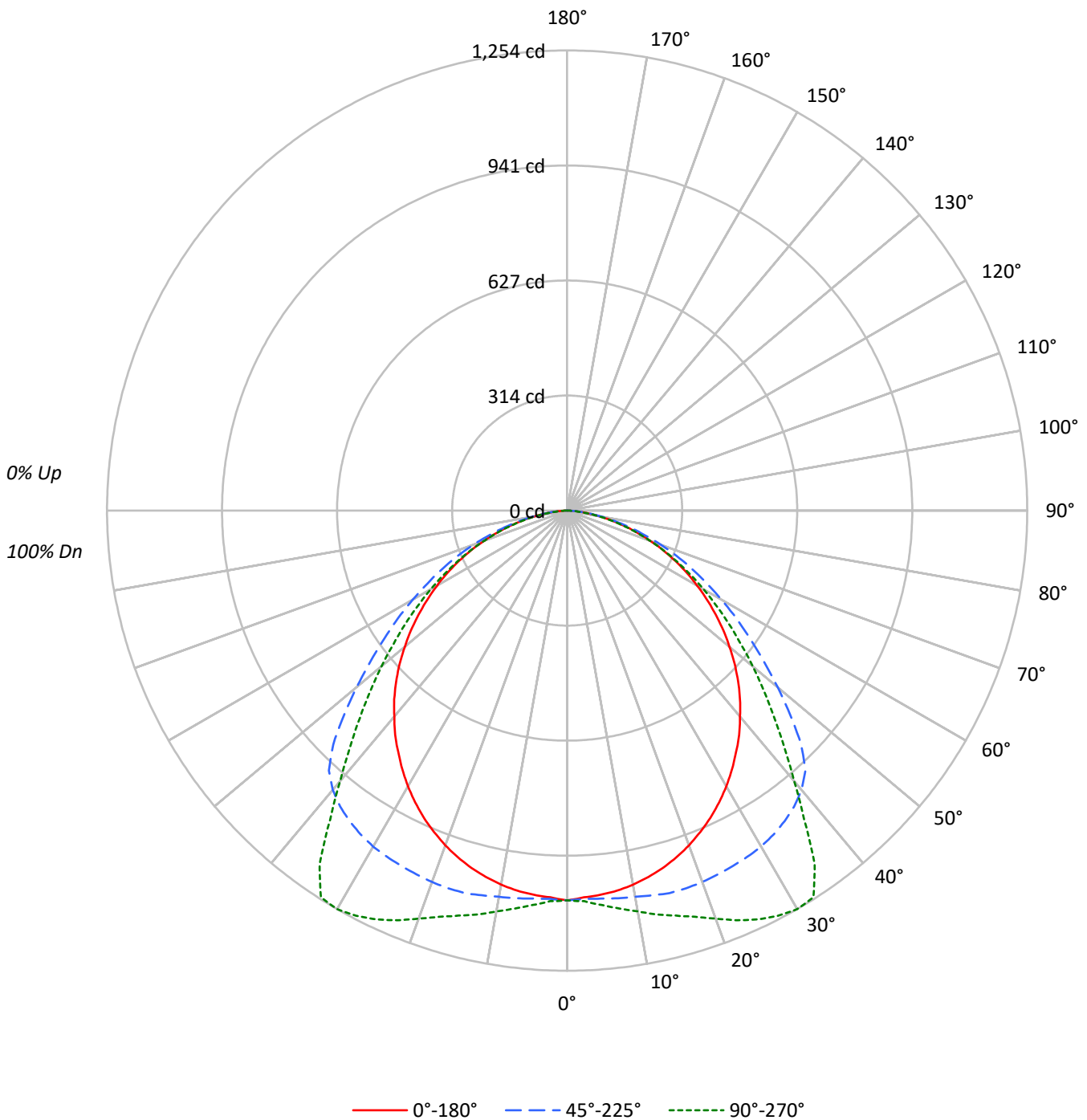
Lumens per Lamp: N/A
Luminaire Lumens: 3228.9 lumens
Efficiency: N/A
Efficacy: 122.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	109	105	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9393	9393	9393
5°	9328	9420	9577
10°	9295	9595	9960
15°	9228	9877	10459
20°	9133	10133	11134
25°	9012	10426	11992
30°	8856	10793	12805
35°	8665	11152	12694
40°	8460	11468	11106
45°	8239	11277	9987
50°	7945	10297	9078
55°	7618	9370	8293
60°	7246	8592	7597
65°	6805	7831	6937
70°	6225	7008	6199
75°	5486	6019	5377
80°	4511	4832	4353
85°	3175	3277	2962

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11277 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.0	3.2
10°-20°	305.5	9.5
20°-30°	497.3	15.4
30°-40°	631.5	19.6
40°-50°	615.3	19.1
50°-60°	504.5	15.6
60°-70°	352.0	10.9
70°-80°	180.7	5.6
80°-90°	40.1	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°	904.7	28.0
0°-40°	1536.2	47.6
0°-60°	2656.1	82.3
0°-90°	3228.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3228.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1062	1062	1062	1062	1062	
5°	1051	1067	1061	1069	1079	100
15°	1008	1040	1079	1122	1143	284
25°	924	983	1069	1179	1229	425
35°	803	881	1033	1183	1176	502
45°	659	740	902	827	799	508
55°	494	570	608	557	538	442
65°	325	372	374	344	332	322
75°	161	178	176	164	157	171
85°	31	32	32	30	29	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1062.4	1062.4	1062.4	1062.4	1062.4
2.5°	1055.1	1068.7	1059.3	1063.5	1065.6
5°	1051.0	1066.6	1061.4	1068.7	1079.1
7.5°	1044.7	1062.4	1065.6	1080.2	1093.7
10°	1035.3	1056.2	1068.7	1093.7	1109.4
12.5°	1022.8	1048.9	1073.9	1108.3	1127.1
15°	1008.2	1039.5	1079.1	1121.9	1142.7
17.5°	990.5	1028.0	1079.1	1132.3	1160.5
20°	970.7	1014.5	1077.0	1145.9	1183.4
22.5°	947.8	999.9	1072.9	1161.5	1208.4
25°	923.8	983.2	1068.7	1179.2	1229.3
27.5°	896.7	963.4	1063.5	1192.8	1244.9
30°	867.5	939.4	1057.2	1199.0	1254.3
32.5°	836.2	911.3	1046.8	1199.0	1249.1
35°	802.8	881.0	1033.2	1183.4	1176.1
37.5°	770.5	848.7	1016.6	1107.3	1061.4
40°	733.0	814.3	993.6	999.9	962.3
42.5°	697.5	777.8	961.3	909.2	875.8
45°	658.9	740.3	901.9	826.8	798.7
47.5°	619.3	699.6	824.7	752.8	726.7
50°	577.6	658.9	748.6	682.9	660.0
52.5°	537.0	615.2	675.6	618.3	596.4
55°	494.2	570.3	607.9	556.8	538.0
57.5°	451.5	524.4	546.3	499.4	481.7
60°	409.8	475.4	485.9	445.2	429.6
62.5°	368.0	424.4	428.5	393.1	379.5
65°	325.3	372.2	374.3	344.1	331.6
67.5°	283.6	322.2	322.2	296.1	285.7
70°	240.8	273.2	271.1	250.2	239.8
72.5°	200.2	223.1	221.0	205.4	198.1
75°	160.6	178.3	176.2	163.7	157.4
77.5°	123.0	135.5	133.5	125.1	119.9
80°	88.6	95.9	94.9	88.6	85.5
82.5°	58.4	62.6	60.5	56.3	54.2
85°	31.3	32.3	32.3	30.2	29.2
87.5°	11.5	11.5	11.5	11.5	10.4
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	19.47	21.07	19.83	21.38	21.69	19.25	20.85	19.62	21.16	21.48
	3H	20.97	22.41	21.35	22.74	23.10	20.72	22.16	21.10	22.49	22.85
	4H	21.47	22.83	21.87	23.17	23.55	21.22	22.57	21.62	22.92	23.30
	6H	21.79	23.05	22.20	23.41	23.80	21.53	22.79	21.95	23.15	23.54
	8H	21.88	23.07	22.30	23.46	23.86	21.61	22.80	22.04	23.19	23.59
	12H	21.92	23.06	22.34	23.44	23.87	21.64	22.79	22.07	23.17	23.60
4H	2H	20.09	21.44	20.49	21.79	22.17	19.92	21.27	20.32	21.62	22.00
	3H	21.82	22.95	22.23	23.34	23.74	21.59	22.71	22.00	23.11	23.51
	4H	22.45	23.46	22.88	23.88	24.31	22.18	23.20	22.62	23.61	24.05
	6H	22.87	23.76	23.33	24.20	24.66	22.60	23.48	23.05	23.92	24.38
	8H	22.99	23.81	23.45	24.26	24.72	22.70	23.53	23.16	23.97	24.44
	12H	23.05	23.79	23.53	24.27	24.74	22.76	23.50	23.24	23.98	24.45
8H	4H	22.69	23.52	23.15	23.96	24.43	22.46	23.28	22.92	23.73	24.19
	6H	23.21	23.90	23.71	24.39	24.86	22.96	23.64	23.45	24.13	24.61
	8H	23.38	23.99	23.89	24.50	24.99	23.10	23.72	23.62	24.23	24.71
	12H	23.49	24.03	23.99	24.52	25.08	23.20	23.75	23.71	24.24	24.80
12H	4H	22.70	23.44	23.18	23.92	24.39	22.47	23.22	22.95	23.69	24.16
	6H	23.23	23.85	23.74	24.36	24.84	22.99	23.60	23.50	24.11	24.60
	8H	23.44	23.99	23.95	24.48	25.04	23.18	23.72	23.69	24.21	24.78