

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: P1439968

Luminaire Tested: S124DR-S675D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439968  
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-S675D835-X4F0-XX-UDD-FLB-W  
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

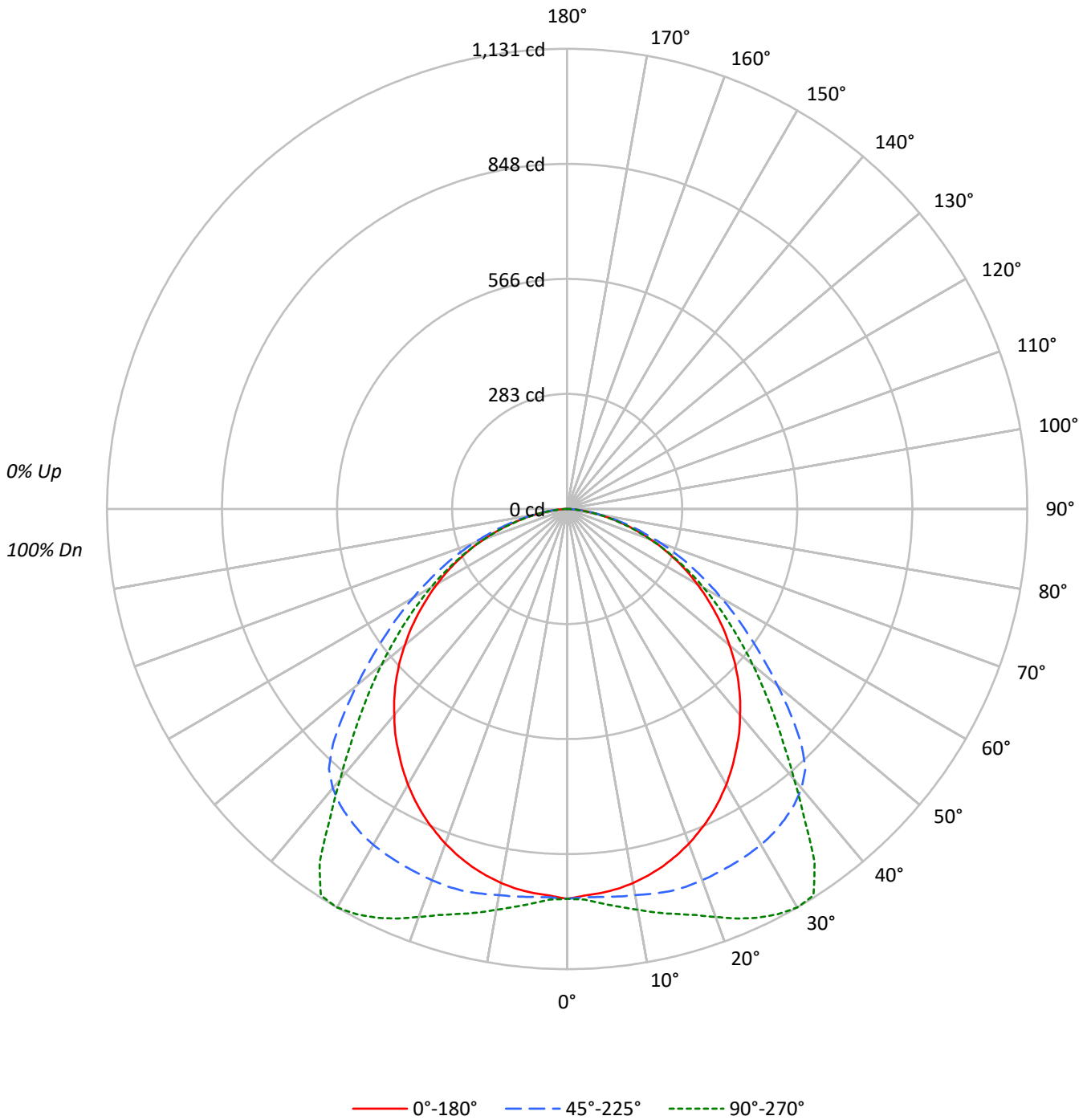
Lumens per Lamp: N/A  
Luminaire Lumens: 2911.5 lumens  
Efficiency: N/A  
Efficacy: 110.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct

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	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°	8470	8470	8470
5°	8411	8494	8636
10°	8382	8652	8980
15°	8321	8907	9432
20°	8236	9138	10040
25°	8126	9401	10813
30°	7986	9732	11547
35°	7813	10056	11446
40°	7628	10341	10016
45°	7430	10168	9005
50°	7163	9284	8185
55°	6869	8449	7478
60°	6534	7747	6849
65°	6136	7061	6255
70°	5615	6318	5589
75°	4946	5428	4851
80°	4068	4358	3926
85°	2861	2952	2668

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 10168 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.9	3.2
10°-20°	275.5	9.5
20°-30°	448.4	15.4
30°-40°	569.4	19.6
40°-50°	554.9	19.1
50°-60°	454.9	15.6
60°-70°	317.4	10.9
70°-80°	162.9	5.6
80°-90°	36.1	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°	815.8	28.0
0°-40°	1385.3	47.6
0°-60°	2395.0	82.3
0°-90°	2911.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2911.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	948	962	957	964	973	90
15°	909	937	973	1012	1030	256
25°	833	887	964	1063	1108	383
35°	724	794	932	1067	1060	453
45°	594	668	813	746	720	458
55°	446	514	548	502	485	398
65°	293	336	338	310	299	290
75°	145	161	159	148	142	154
85°	28	29	29	27	26	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	958.0	958.0	958.0	958.0	958.0
2.5°	951.4	963.7	955.2	959.0	960.8
5°	947.7	961.8	957.1	963.7	973.1
7.5°	942.0	958.0	960.8	974.0	986.2
10°	933.6	952.4	963.7	986.2	1000.3
12.5°	922.3	945.8	968.4	999.4	1016.3
15°	909.1	937.3	973.1	1011.6	1030.4
17.5°	893.1	927.0	973.1	1021.0	1046.4
20°	875.3	914.8	971.2	1033.2	1067.1
22.5°	854.6	901.6	967.4	1047.3	1089.6
25°	833.0	886.6	963.7	1063.3	1108.4
27.5°	808.5	868.7	959.0	1075.5	1122.5
30°	782.2	847.1	953.3	1081.2	1131.0
32.5°	754.0	821.7	943.9	1081.2	1126.3
35°	723.9	794.4	931.7	1067.1	1060.5
37.5°	694.8	765.3	916.7	998.4	957.1
40°	660.9	734.3	896.0	901.6	867.8
42.5°	629.0	701.4	866.8	819.8	789.7
45°	594.2	667.5	813.2	745.5	720.2
47.5°	558.5	630.8	743.7	678.8	655.3
50°	520.8	594.2	675.0	615.8	595.1
52.5°	484.2	554.7	609.2	557.5	537.8
55°	445.6	514.3	548.1	502.0	485.1
57.5°	407.1	472.9	492.6	450.3	434.4
60°	369.5	428.7	438.1	401.4	387.3
62.5°	331.9	382.6	386.4	354.4	342.2
65°	293.3	335.6	337.5	310.3	299.0
67.5°	255.7	290.5	290.5	267.0	257.6
70°	217.2	246.3	244.4	225.6	216.2
72.5°	180.5	201.2	199.3	185.2	178.6
75°	144.8	160.8	158.9	147.6	142.0
77.5°	110.9	122.2	120.3	112.8	108.1
80°	79.9	86.5	85.6	79.9	77.1
82.5°	52.6	56.4	54.5	50.8	48.9
85°	28.2	29.1	29.1	27.3	26.3
87.5°	10.3	10.3	10.3	10.3	9.4
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	19.11	20.71	19.47	21.02	21.33	18.89	20.49	19.26	20.80	21.12
	3H	20.61	22.05	20.99	22.38	22.74	20.36	21.80	20.74	22.13	22.49
	4H	21.11	22.47	21.51	22.81	23.19	20.86	22.21	21.26	22.56	22.94
	6H	21.43	22.69	21.85	23.05	23.44	21.17	22.43	21.59	22.79	23.18
	8H	21.52	22.71	21.94	23.10	23.50	21.25	22.45	21.68	22.83	23.23
	12H	21.56	22.70	21.99	23.08	23.51	21.29	22.43	21.72	22.81	23.24
4H	2H	19.73	21.08	20.13	21.43	21.81	19.56	20.91	19.96	21.26	21.64
	3H	21.46	22.59	21.87	22.98	23.38	21.23	22.35	21.64	22.75	23.15
	4H	22.09	23.10	22.52	23.52	23.95	21.82	22.84	22.26	23.25	23.69
	6H	22.51	23.40	22.97	23.84	24.30	22.24	23.12	22.69	23.56	24.02
	8H	22.63	23.46	23.09	23.90	24.36	22.34	23.17	22.80	23.61	24.08
	12H	22.69	23.43	23.17	23.91	24.38	22.40	23.14	22.88	23.62	24.09
8H	4H	22.33	23.16	22.79	23.60	24.07	22.10	22.92	22.56	23.37	23.83
	6H	22.85	23.54	23.35	24.03	24.50	22.60	23.28	23.09	23.77	24.25
	8H	23.02	23.63	23.53	24.14	24.63	22.75	23.36	23.26	23.87	24.35
	12H	23.13	23.67	23.63	24.16	24.72	22.84	23.39	23.35	23.88	24.44
12H	4H	22.34	23.08	22.82	23.56	24.03	22.11	22.86	22.60	23.33	23.80
	6H	22.87	23.49	23.38	24.00	24.48	22.63	23.24	23.14	23.75	24.24
	8H	23.08	23.63	23.59	24.12	24.68	22.82	23.36	23.33	23.85	24.42