

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: P1217401

Luminaire Tested: S124DRP-S290D835-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1217401  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/9/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-S290D835-X4F0-XX-UDD-G-W  
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

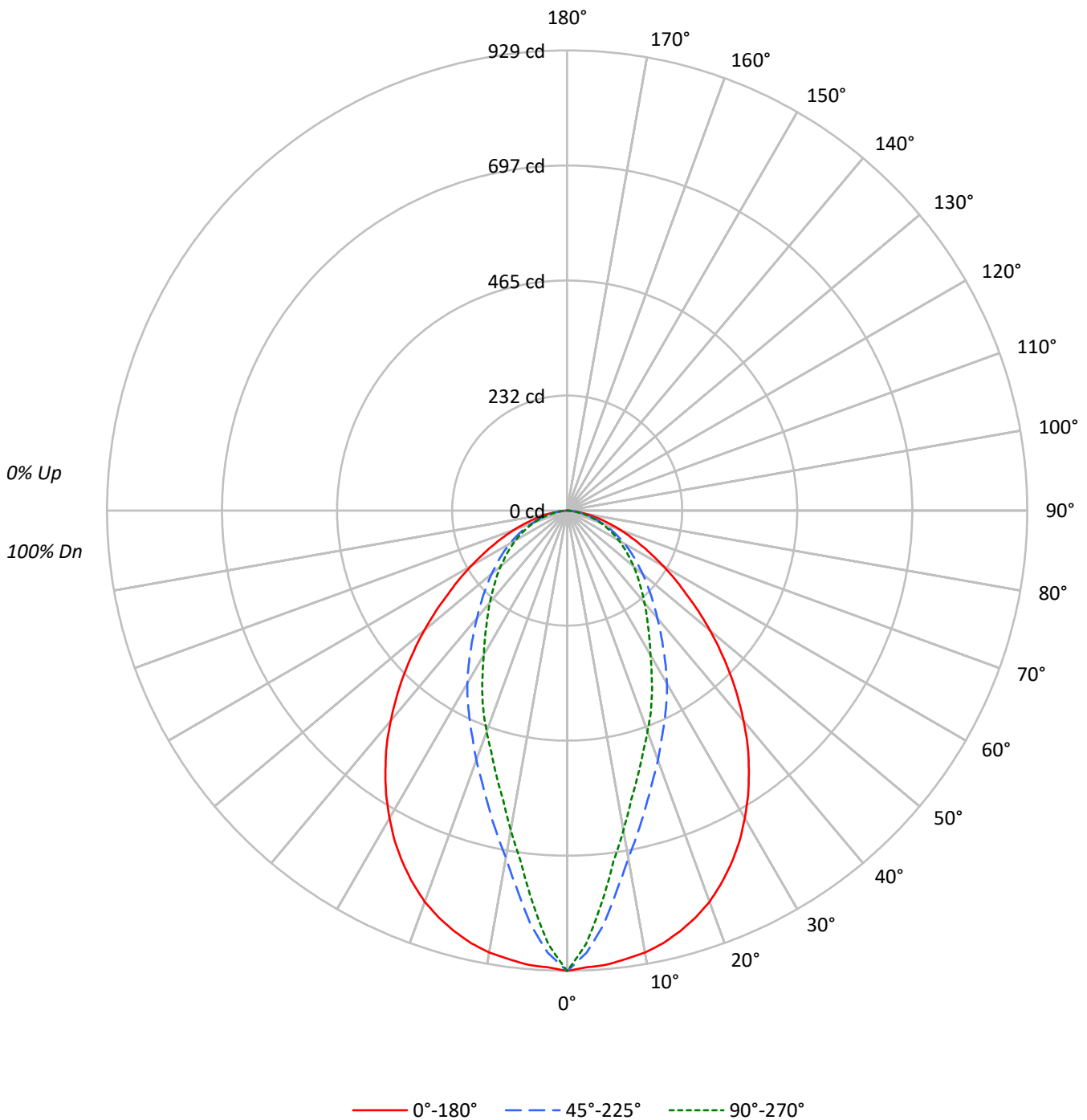
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1303.3 lumens  
Efficiency: N/A  
Efficacy: 103.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.6  
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

TEST NUMBER: P1217401

CATALOG NUMBER: S124DRP-S290D835-X4F0-XX-UDD-G-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1217401

CATALOG NUMBER: S124DRP-S290D835-X4F0-XX-UDD-G-W

**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	110	106	102	99	108	104	100	97	100	97	94	96	94	92	92	90	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65
4	87	76	68	62	84	75	67	62	72	66	61	70	64	60	68	63	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	57	52	47	45
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37
9	62	49	42	36	60	49	41	36	48	41	36	47	40	36	46	40	36	34
10	58	46	38	34	57	45	38	34	44	38	33	43	37	33	43	37	33	31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8216	8216	8216
5°	8168	7452	7064
10°	8134	6389	5878
15°	8049	5637	5056
20°	7908	5044	4466
25°	7657	4539	3956
30°	7319	4115	3434
35°	6903	3648	3074
40°	6395	3269	2801
45°	5813	2973	2584
50°	5179	2736	2415
55°	4516	2542	2258
60°	3964	2366	2127
65°	3433	2182	1985
70°	2973	1978	1830
75°	2473	1749	1609
80°	1914	1415	1314
85°	1207	954	872

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5813 cd/sqm

TEST NUMBER: P1217401

CATALOG NUMBER: S124DRP-S290D835-X4F0-XX-UDD-G-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.8	6.0
10°-20°	184.8	14.2
20°-30°	236.1	18.1
30°-40°	239.8	18.4
40°-50°	212.6	16.3
50°-60°	167.1	12.8
60°-70°	113.8	8.7
70°-80°	58.4	4.5
80°-90°	12.9	1.0
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°	498.7	38.3
0°-40°	738.6	56.7
0°-60°	1118.2	85.8
0°-90°	1303.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1303.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	929	929	929	929	929	
5°	920	897	840	807	796	87
15°	879	734	616	565	552	248
25°	785	575	465	421	406	361
35°	640	436	338	295	285	399
45°	465	314	238	213	207	358
55°	293	209	165	150	146	265
65°	164	127	104	97	95	164
75°	72	60	51	49	47	78
85°	12	11	9	9	9	16
90°	0	0	0	0	0	



TEST NUMBER: P1217401

CATALOG NUMBER: S124DRP-S290D835-X4F0-XX-UDD-G-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	929.3	929.3	929.3	929.3	929.3
2.5°	922.8	924.0	893.3	882.3	875.7
5°	920.3	897.0	839.7	807.4	795.9
7.5°	912.9	862.2	771.8	727.2	715.3
10°	906.0	822.5	711.6	667.4	654.7
12.5°	894.5	778.7	663.3	612.6	597.4
15°	879.4	734.1	615.9	565.1	552.4
17.5°	861.4	691.6	572.9	524.2	510.3
20°	840.5	652.3	536.1	486.1	474.7
22.5°	814.3	613.4	498.4	453.4	440.7
25°	784.9	575.3	465.3	420.7	405.5
27.5°	753.4	538.5	434.6	385.1	369.1
30°	716.9	503.3	403.1	351.1	336.4
32.5°	680.1	468.5	369.9	320.8	309.0
35°	639.6	435.8	338.0	295.0	284.8
37.5°	598.7	404.3	309.4	271.7	262.7
40°	554.1	373.6	283.2	250.0	242.7
42.5°	509.5	342.9	259.4	230.8	223.8
45°	464.9	313.9	237.8	213.2	206.7
47.5°	419.8	285.2	217.7	196.0	190.7
50°	376.5	258.2	198.9	180.1	175.6
52.5°	334.3	232.8	180.9	164.9	160.0
55°	293.0	209.1	164.9	150.2	146.5
57.5°	257.8	187.0	149.0	136.3	133.4
60°	224.2	165.7	133.8	123.2	120.3
62.5°	192.7	146.1	118.7	110.1	108.0
65°	164.1	126.9	104.3	97.0	94.9
67.5°	137.9	109.3	89.6	84.3	82.7
70°	115.0	91.7	76.5	72.0	70.8
72.5°	92.1	74.9	63.4	60.2	58.9
75°	72.4	59.7	51.2	48.7	47.1
77.5°	54.4	45.4	39.3	37.2	36.0
80°	37.6	32.3	27.8	27.0	25.8
82.5°	23.7	20.5	18.0	17.6	16.4
85°	11.9	11.0	9.4	9.4	8.6
87.5°	4.1	3.7	3.7	3.7	3.3
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1217401  
 CATALOG NUMBER: S124DRP-S290D835-X4F0-XX-UDD-G-W

**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	16.22	17.71	16.59	18.02	18.34	13.55	15.04	13.91	15.35	15.66
	3H	17.81	19.15	18.19	19.48	19.84	15.15	16.48	15.52	16.81	17.17
	4H	18.34	19.59	18.74	19.94	20.32	15.70	16.95	16.11	17.30	17.68
	6H	18.68	19.83	19.09	20.20	20.59	16.06	17.21	16.47	17.58	17.97
	8H	18.75	19.85	19.18	20.24	20.64	16.15	17.25	16.57	17.64	18.04
	12H	18.78	19.83	19.21	20.21	20.64	16.18	17.23	16.61	17.62	18.05
4H	2H	16.45	17.70	16.85	18.05	18.43	14.22	15.47	14.62	15.82	16.20
	3H	18.23	19.27	18.65	19.67	20.07	16.01	17.05	16.42	17.45	17.85
	4H	18.87	19.81	19.31	20.22	20.66	16.67	17.61	17.11	18.02	18.46
	6H	19.32	20.13	19.78	20.57	21.03	17.13	17.94	17.59	18.38	18.84
	8H	19.43	20.19	19.90	20.63	21.10	17.25	18.00	17.71	18.45	18.92
	12H	19.49	20.16	19.97	20.64	21.11	17.31	17.98	17.79	18.46	18.93
8H	4H	18.98	19.73	19.44	20.18	20.65	16.97	17.73	17.44	18.18	18.64
	6H	19.50	20.12	19.99	20.61	21.09	17.52	18.15	18.02	18.64	19.12
	8H	19.65	20.21	20.17	20.72	21.21	17.69	18.25	18.21	18.76	19.25
	12H	19.75	20.24	20.26	20.74	21.30	17.80	18.29	18.31	18.78	19.35
12H	4H	18.97	19.64	19.45	20.12	20.59	17.00	17.67	17.48	18.15	18.62
	6H	19.49	20.05	20.00	20.56	21.05	17.56	18.12	18.08	18.63	19.12
	8H	19.68	20.17	20.19	20.67	21.23	17.77	18.27	18.28	18.76	19.32