

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: P1217385

Luminaire Tested: S124DRP-H865D850-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1217385  
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-H865D850-X4F0-XX-UDD-G-W  
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

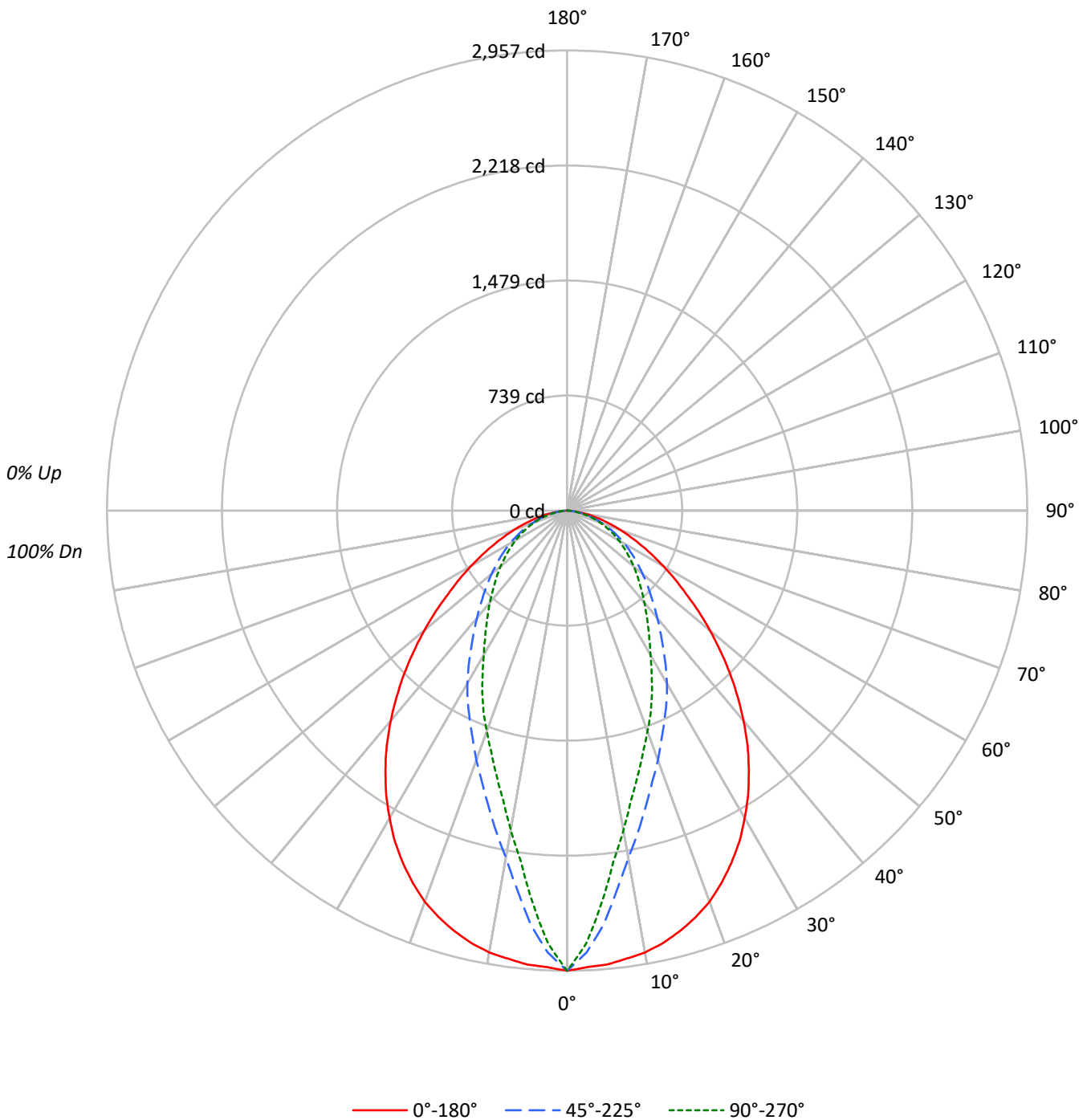
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4147.1 lumens  
Efficiency: N/A  
Efficacy: 134.2 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): 30.9  
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: P1217385

CATALOG NUMBER: S124DRP-H865D850-X4F0-XX-UDD-G-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1217385

CATALOG NUMBER: S124DRP-H865D850-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°	26144	26144	26144
5°	25990	23714	22477
10°	25881	20328	18703
15°	25613	17937	16090
20°	25164	16049	14211
25°	24363	14443	12588
30°	23290	13094	10927
35°	21967	11608	9782
40°	20348	10399	8911
45°	18495	9459	8222
50°	16477	8704	7683
55°	14371	8088	7185
60°	12617	7529	6769
65°	10923	6946	6320
70°	9459	6295	5824
75°	7874	5561	5114
80°	6100	4506	4175
85°	3835	3033	2769

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18495 cd/sqm



TEST NUMBER: P1217385

CATALOG NUMBER: S124DRP-H865D850-X4F0-XX-UDD-G-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.5	6.0
10°-20°	588.0	14.2
20°-30°	751.4	18.1
30°-40°	763.1	18.4
40°-50°	676.5	16.3
50°-60°	531.6	12.8
60°-70°	362.0	8.7
70°-80°	185.8	4.5
80°-90°	41.2	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°	1586.9	38.3
0°-40°	2350.0	56.7
0°-60°	3558.1	85.8
0°-90°	4147.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4147.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2957	2957	2957	2957	2957	
5°	2928	2854	2672	2569	2533	278
15°	2798	2336	1960	1798	1758	788
25°	2497	1831	1480	1338	1290	1148
35°	2035	1387	1076	939	906	1270
45°	1479	999	756	678	658	1140
55°	932	665	525	478	466	842
65°	522	404	332	309	302	522
75°	230	190	163	155	150	248
85°	38	35	30	30	27	51
90°	0	0	0	0	0	



TEST NUMBER: P1217385

CATALOG NUMBER: S124DRP-H865D850-X4F0-XX-UDD-G-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2957.0	2957.0	2957.0	2957.0	2957.0
2.5°	2936.2	2940.1	2842.4	2807.3	2786.5
5°	2928.4	2854.2	2671.9	2569.0	2532.6
7.5°	2904.9	2743.5	2455.7	2313.8	2276.0
10°	2882.8	2617.2	2264.3	2123.7	2083.3
12.5°	2846.4	2477.9	2110.7	1949.2	1901.0
15°	2798.2	2335.9	1959.6	1798.2	1757.8
17.5°	2740.9	2200.5	1822.9	1668.0	1623.7
20°	2674.5	2075.5	1705.7	1546.9	1510.4
22.5°	2591.1	1951.8	1585.9	1442.7	1402.3
25°	2497.4	1830.7	1480.5	1338.5	1290.4
27.5°	2397.1	1713.5	1382.8	1225.3	1174.5
30°	2281.3	1601.6	1282.6	1117.2	1070.3
32.5°	2164.1	1490.9	1177.1	1020.8	983.1
35°	2035.2	1386.7	1075.5	938.8	906.3
37.5°	1904.9	1286.5	984.4	864.6	835.9
40°	1763.0	1188.8	901.0	795.6	772.1
42.5°	1621.1	1091.1	825.5	734.4	712.2
45°	1479.2	998.7	756.5	678.4	657.6
47.5°	1335.9	907.6	692.7	623.7	606.8
50°	1197.9	821.6	632.8	572.9	558.6
52.5°	1063.8	740.9	575.5	524.7	509.1
55°	932.3	665.4	524.7	477.9	466.1
57.5°	820.3	595.1	474.0	433.6	424.5
60°	713.5	527.3	425.8	391.9	382.8
62.5°	613.3	464.8	377.6	350.3	343.8
65°	522.1	403.6	332.0	308.6	302.1
67.5°	438.8	347.7	285.2	268.2	263.0
70°	365.9	291.7	243.5	229.2	225.3
72.5°	293.0	238.3	201.8	191.4	187.5
75°	230.5	190.1	162.8	154.9	149.7
77.5°	173.2	144.5	125.0	118.5	114.6
80°	119.8	102.9	88.5	85.9	82.0
82.5°	75.5	65.1	57.3	56.0	52.1
85°	37.8	35.2	29.9	29.9	27.3
87.5°	13.0	11.7	11.7	11.7	10.4
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1217385  
 CATALOG NUMBER: S124DRP-H865D850-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	20.24	21.73	20.61	22.04	22.36	17.57	19.06	17.93	19.37	19.68
	3H	21.84	23.17	22.21	23.50	23.86	19.17	20.50	19.55	20.83	21.19
	4H	22.37	23.62	22.77	23.97	24.34	19.72	20.97	20.13	21.32	21.70
	6H	22.70	23.85	23.11	24.22	24.61	20.08	21.23	20.49	21.60	21.99
	8H	22.78	23.87	23.20	24.26	24.66	20.17	21.27	20.59	21.66	22.06
	12H	22.80	23.86	23.24	24.24	24.67	20.20	21.25	20.63	21.64	22.07
4H	2H	20.47	21.72	20.87	22.07	22.45	18.24	19.49	18.64	19.84	20.22
	3H	22.26	23.29	22.67	23.69	24.09	20.03	21.07	20.44	21.47	21.87
	4H	22.90	23.83	23.33	24.24	24.68	20.70	21.63	21.13	22.04	22.48
	6H	23.34	24.15	23.80	24.60	25.06	21.15	21.96	21.61	22.41	22.87
	8H	23.45	24.21	23.92	24.66	25.12	21.27	22.02	21.73	22.47	22.94
	12H	23.51	24.19	23.99	24.67	25.14	21.33	22.00	21.81	22.48	22.95
8H	4H	23.00	23.76	23.46	24.20	24.67	20.99	21.75	21.46	22.20	22.66
	6H	23.52	24.14	24.02	24.63	25.11	21.54	22.17	22.04	22.66	23.14
	8H	23.67	24.23	24.19	24.74	25.23	21.71	22.27	22.23	22.78	23.27
	12H	23.77	24.27	24.29	24.76	25.33	21.82	22.31	22.33	22.80	23.37
12H	4H	22.99	23.67	23.47	24.14	24.62	21.02	21.69	21.50	22.17	22.64
	6H	23.51	24.07	24.03	24.58	25.07	21.58	22.14	22.10	22.65	23.14
	8H	23.70	24.20	24.22	24.69	25.26	21.79	22.29	22.31	22.78	23.35