

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060789

Luminaire Tested: S124RDR-H350D830-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060789  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H350D830-X4F0-XX-UDD-SVL-B  
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

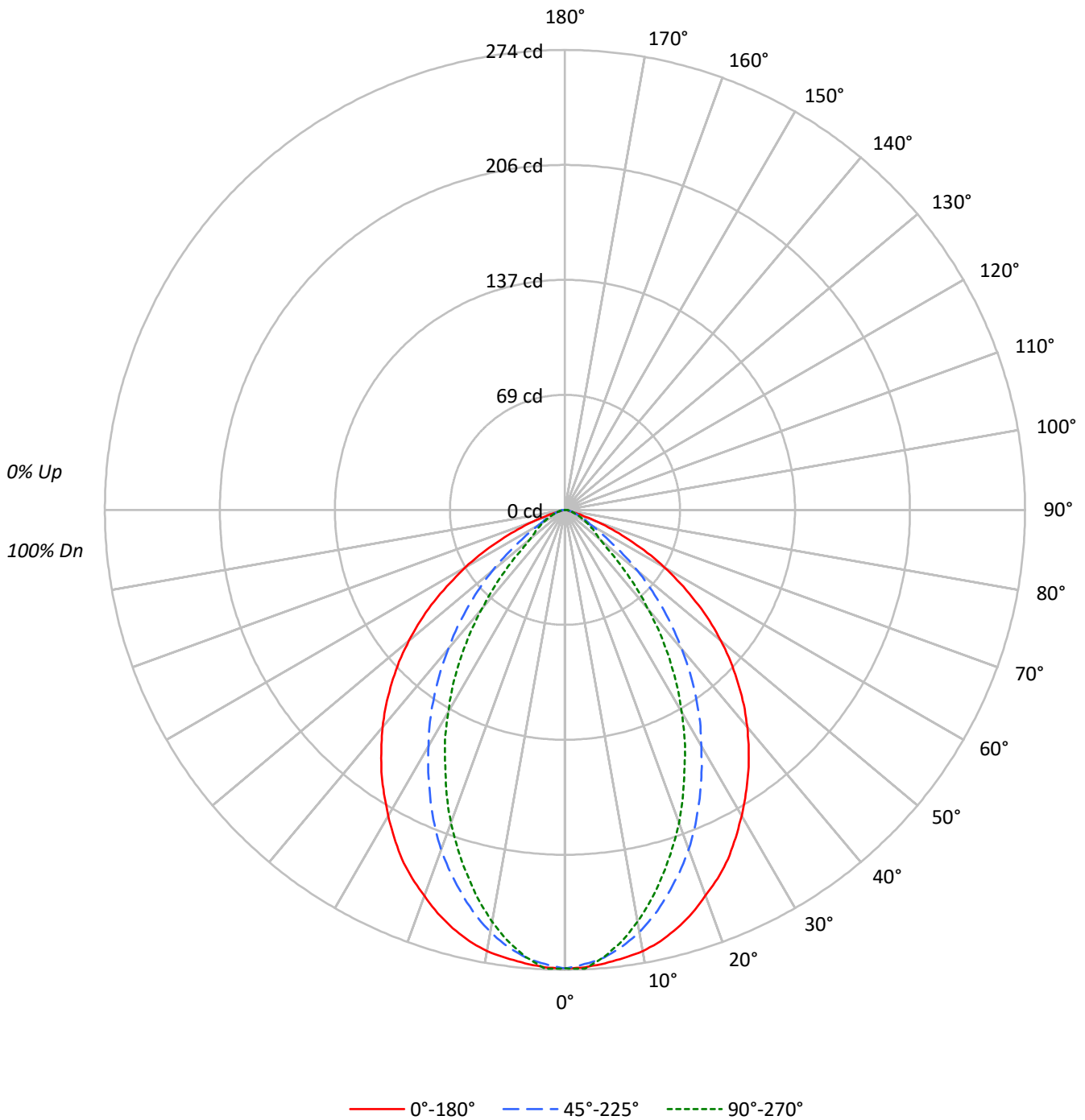
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 402.8 lumens  
Efficiency: N/A  
Efficacy: 34.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 11.7  
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: P1060789

CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-SVL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1060789

CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-SVL-B

**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	112	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63
5	84	74	66	61	82	73	66	60	71	65	60	69	63	59	67	62	59	57
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	48	47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

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

	0°	45°	90°
0°	2353	2353	2353
5°	2344	2315	2311
10°	2335	2234	2180
15°	2302	2113	2007
20°	2242	1975	1819
25°	2182	1802	1601
30°	2093	1615	1381
35°	2003	1428	1141
40°	1899	1215	864
45°	1776	994	581
50°	1624	753	360
55°	1426	497	306
60°	1180	305	251
65°	854	234	204
70°	466	174	156
75°	103	126	140
80°	74	94	114
85°	79	79	119

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1776 cd/sqm



TEST NUMBER: P1060789

CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-SVL-B

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.3	6.3
10°-20°	67.2	16.7
20°-30°	89.1	22.1
30°-40°	88.4	21.9
40°-50°	68.0	16.9
50°-60°	40.5	10.1
60°-70°	18.4	4.6
70°-80°	4.8	1.2
80°-90°	1.1	0.3
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°	181.6	45.1
0°-40°	270.0	67.0
0°-60°	378.5	94.0
0°-90°	402.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	402.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	273	273	273	273	273	
5°	271	272	268	268	267	26
15°	258	252	237	229	225	73
25°	230	213	190	174	168	105
35°	190	167	136	115	108	119
45°	146	117	82	57	48	112
55°	95	68	33	21	20	85
65°	42	25	12	10	10	42
75°	3	4	4	4	4	6
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



TEST NUMBER: P1060789

CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-SVL-B

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	273.2	273.2	273.2	273.2	273.2
2.5°	272.8	273.2	270.9	272.8	273.6
5°	271.2	271.6	267.8	267.8	267.4
7.5°	269.3	268.6	262.4	260.1	259.3
10°	267.0	264.3	255.5	250.9	249.3
12.5°	263.2	258.9	247.0	240.5	237.8
15°	258.2	251.6	237.0	228.9	225.1
17.5°	252.0	243.9	226.6	216.2	212.0
20°	244.7	233.9	215.5	202.4	198.5
22.5°	237.8	224.3	203.1	188.1	183.9
25°	229.7	213.2	189.7	173.9	168.5
27.5°	220.1	202.4	176.2	160.1	154.7
30°	210.5	190.8	162.4	145.4	138.9
32.5°	200.5	178.9	149.7	130.4	124.3
35°	190.5	166.6	135.8	115.0	108.5
37.5°	179.7	154.3	122.0	100.4	93.1
40°	168.9	142.4	108.1	86.2	76.9
42.5°	157.7	130.0	94.6	71.6	62.3
45°	145.8	117.3	81.6	56.9	47.7
47.5°	133.9	105.4	68.5	42.7	34.2
50°	121.2	92.7	56.2	31.2	26.9
52.5°	108.5	80.4	43.9	24.2	23.1
55°	95.0	67.7	33.1	20.8	20.4
57.5°	81.2	56.2	23.9	18.1	17.3
60°	68.5	45.4	17.7	15.4	14.6
62.5°	55.4	34.2	14.6	12.7	11.9
65°	41.9	25.0	11.5	10.0	10.0
67.5°	30.4	16.9	9.2	8.1	7.7
70°	18.5	10.4	6.9	6.5	6.2
72.5°	9.2	6.2	5.4	5.0	5.0
75°	3.1	3.8	3.8	4.2	4.2
77.5°	2.3	2.7	2.7	3.1	3.1
80°	1.5	1.9	1.9	2.3	2.3
82.5°	1.2	1.2	1.5	1.5	1.9
85°	0.8	0.8	0.8	1.2	1.2
87.5°	0.4	0.4	0.4	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1060789  
 CATALOG NUMBER: S124RDR-H350D830-X4F0-XX-UDD-SVL-B

**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	12.09	13.43	12.46	13.74	14.06	3.64	4.98	4.01	5.29	5.61
	3H	12.60	13.78	12.98	14.11	14.48	4.46	5.64	4.84	5.97	6.34
	4H	12.57	13.67	12.97	14.02	14.40	4.74	5.84	5.14	6.19	6.57
	6H	12.50	13.51	12.92	13.88	14.28	4.91	5.92	5.33	6.29	6.69
	8H	12.47	13.42	12.90	13.81	14.22	4.98	5.93	5.41	6.32	6.73
	12H	12.43	13.34	12.86	13.72	14.15	5.02	5.94	5.46	6.32	6.75
4H	2H	11.94	13.03	12.34	13.38	13.77	4.08	5.18	4.48	5.53	5.91
	3H	12.49	13.38	12.90	13.79	14.19	5.05	5.94	5.46	6.34	6.75
	4H	12.46	13.25	12.89	13.67	14.12	5.40	6.20	5.84	6.62	7.06
	6H	12.40	13.09	12.87	13.54	14.00	5.66	6.34	6.12	6.79	7.26
	8H	12.36	13.00	12.83	13.44	13.92	5.74	6.38	6.21	6.83	7.30
	12H	12.32	12.88	12.81	13.37	13.84	5.82	6.39	6.31	6.87	7.34
8H	4H	12.35	12.99	12.82	13.43	13.90	5.49	6.13	5.96	6.58	7.05
	6H	12.29	12.81	12.79	13.30	13.78	5.80	6.33	6.31	6.82	7.30
	8H	12.24	12.71	12.76	13.22	13.71	5.93	6.40	6.45	6.91	7.41
	12H	12.21	12.62	12.72	13.12	13.69	6.07	6.49	6.59	6.98	7.55
12H	4H	12.30	12.87	12.79	13.35	13.83	5.47	6.03	5.95	6.51	6.99
	6H	12.23	12.70	12.75	13.21	13.71	5.78	6.25	6.30	6.77	7.26
	8H	12.20	12.62	12.72	13.11	13.68	5.95	6.36	6.46	6.86	7.43