

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: P1060813

Luminaire Tested: S124RDR-H350D850-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060813
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-39)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H350D850-X4F0-XX-UDD-BVL-B
Description: DEFINE 4 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

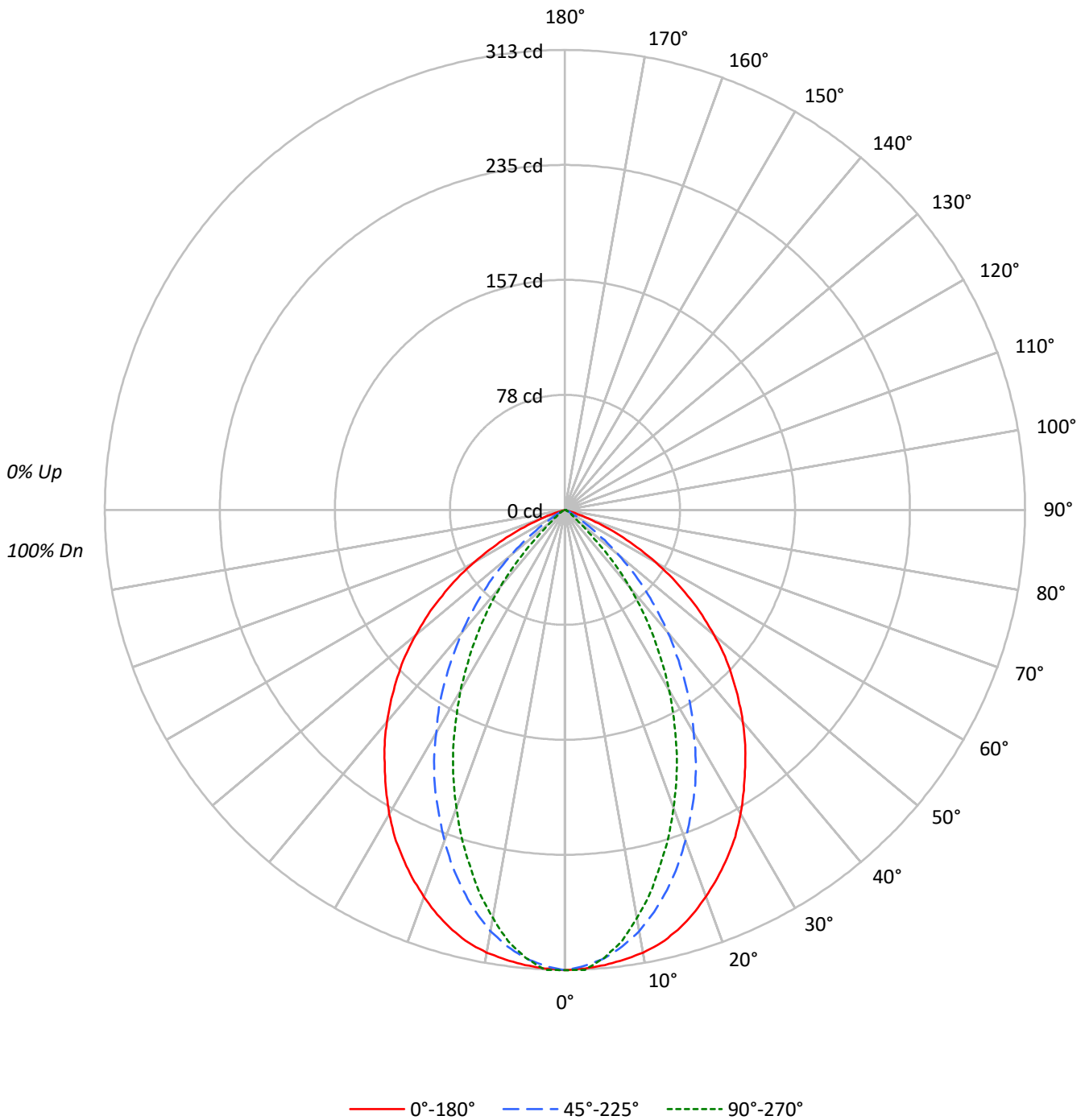
Lumens per Lamp: N/A
Luminaire Lumens: 409.1 lumens
Efficiency: N/A
Efficacy: 35.0 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 0.83 / 0.98
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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: P1060813

CATALOG NUMBER: S124RDR-H350D850-X4F0-XX-UDD-BVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1060813

CATALOG NUMBER: S124RDR-H350D850-X4F0-XX-UDD-BVL-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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91				91
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82				82
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				74
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46				46
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2698	2698	2698
5°	2688	2649	2645
10°	2676	2545	2466
15°	2640	2389	2231
20°	2568	2195	1978
25°	2482	1987	1707
30°	2376	1742	1413
35°	2246	1494	1100
40°	2117	1226	769
45°	1963	943	380
50°	1771	636	127
55°	1530	326	89
60°	1225	117	62
65°	839	65	29
70°	375	35	23
75°	0	17	17
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1963 cd/sqm



TEST NUMBER: P1060813

CATALOG NUMBER: S124RDR-H350D850-X4F0-XX-UDD-BVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.9	7.1
10°-20°	75.8	18.5
20°-30°	98.2	24.0
30°-40°	93.3	22.8
40°-50°	66.1	16.1
50°-60°	33.9	8.3
60°-70°	11.9	2.9
70°-80°	1.0	0.3
80°-90°	0.0	0.0
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°	202.9	49.6
0°-40°	296.2	72.4
0°-60°	396.2	96.8
0°-90°	409.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	409.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	313	313	313	313	313	
5°	311	312	306	306	306	30
15°	296	287	268	255	250	83
25°	261	241	209	187	180	120
35°	214	182	142	114	105	134
45°	161	124	77	44	31	124
55°	102	67	22	6	6	91
65°	41	20	3	2	1	41
75°	0	0	0	0	0	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P1060813

CATALOG NUMBER: S124RDR-H350D850-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	313.3	313.3	313.3	313.3	313.3
2.5°	312.4	313.3	310.6	312.8	313.3
5°	311.0	311.5	306.5	306.5	306.0
7.5°	308.7	307.8	299.7	296.5	296.1
10°	306.0	302.9	291.1	284.3	282.0
12.5°	302.0	296.1	280.2	270.3	267.5
15°	296.1	287.0	268.0	255.3	250.3
17.5°	288.8	277.1	254.4	239.0	234.0
20°	280.2	265.3	239.5	222.3	215.9
22.5°	271.2	254.0	224.1	204.6	198.3
25°	261.2	240.8	209.1	187.0	179.7
27.5°	250.8	226.8	192.9	169.8	160.3
30°	239.0	212.8	175.2	151.2	142.1
32.5°	226.4	197.4	159.4	133.5	122.7
35°	213.7	182.4	142.1	114.5	104.6
37.5°	201.5	168.4	124.9	96.0	86.5
40°	188.3	153.0	109.1	79.2	68.4
42.5°	174.7	138.1	92.8	62.0	50.3
45°	161.2	124.0	77.4	44.4	31.2
47.5°	147.6	109.1	62.5	28.1	16.8
50°	132.2	94.6	47.5	14.9	9.5
52.5°	117.7	81.0	34.0	8.6	7.2
55°	101.9	67.0	21.7	6.3	5.9
57.5°	86.9	53.4	12.2	5.0	4.5
60°	71.1	41.2	6.8	4.1	3.6
62.5°	55.2	29.9	4.5	2.7	2.3
65°	41.2	19.9	3.2	1.8	1.4
67.5°	27.2	11.3	2.3	0.9	0.9
70°	14.9	5.4	1.4	0.9	0.9
72.5°	5.4	1.8	0.9	0.5	0.5
75°	0.0	0.5	0.5	0.5	0.5
77.5°	0.0	0.0	0.0	0.0	0.5
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1060813
 CATALOG NUMBER: S124RDR-H350D850-X4F0-XX-UDD-BVL-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	11.97	13.23	12.34	13.54	13.86	0.00	0.00	0.00	0.00	0.00
	3H	12.25	13.36	12.63	13.69	14.05	0.00	0.00	0.00	0.00	0.00
	4H	12.18	13.20	12.58	13.55	13.94	0.00	0.00	0.00	0.00	0.00
	6H	12.09	13.03	12.50	13.40	13.79	0.00	0.00	0.00	0.00	0.00
	8H	12.04	12.93	12.47	13.32	13.73	0.00	0.00	0.00	0.00	0.00
	12H	12.00	12.84	12.43	13.23	13.66	0.00	0.00	0.00	0.00	0.00
4H	2H	11.75	12.77	12.15	13.12	13.51	0.00	0.00	0.00	0.00	0.00
	3H	12.03	12.86	12.44	13.26	13.67	0.00	0.00	0.00	0.00	0.00
	4H	11.94	12.67	12.37	13.09	13.54	0.00	0.00	0.00	0.00	0.00
	6H	11.85	12.48	12.32	12.93	13.40	0.00	0.00	0.00	0.00	0.00
	8H	11.79	12.38	12.26	12.83	13.30	0.00	0.00	0.00	0.00	0.00
	12H	11.74	12.25	12.23	12.74	13.21	0.00	0.00	0.00	0.00	0.00
8H	4H	11.79	12.38	12.26	12.83	13.30	0.00	0.00	0.00	0.00	0.00
	6H	11.68	12.16	12.19	12.66	13.14	0.00	0.00	0.00	0.00	0.00
	8H	11.61	12.04	12.14	12.56	13.05	0.00	0.00	0.00	0.00	0.00
	12H	11.56	11.94	12.08	12.44	13.01	0.00	0.00	0.00	0.00	0.00
12H	4H	11.74	12.25	12.23	12.74	13.21	0.00	0.00	0.00	0.00	0.00
	6H	11.61	12.04	12.14	12.56	13.05	0.00	0.00	0.00	0.00	0.00
	8H	11.56	11.94	12.08	12.44	13.01	0.00	0.00	0.00	0.00	0.00