

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: P1060858

Luminaire Tested: S124RDR-H350D950-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060858  
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-H350D950-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, 90 CRI LEDS  
Ballast/Driver: -

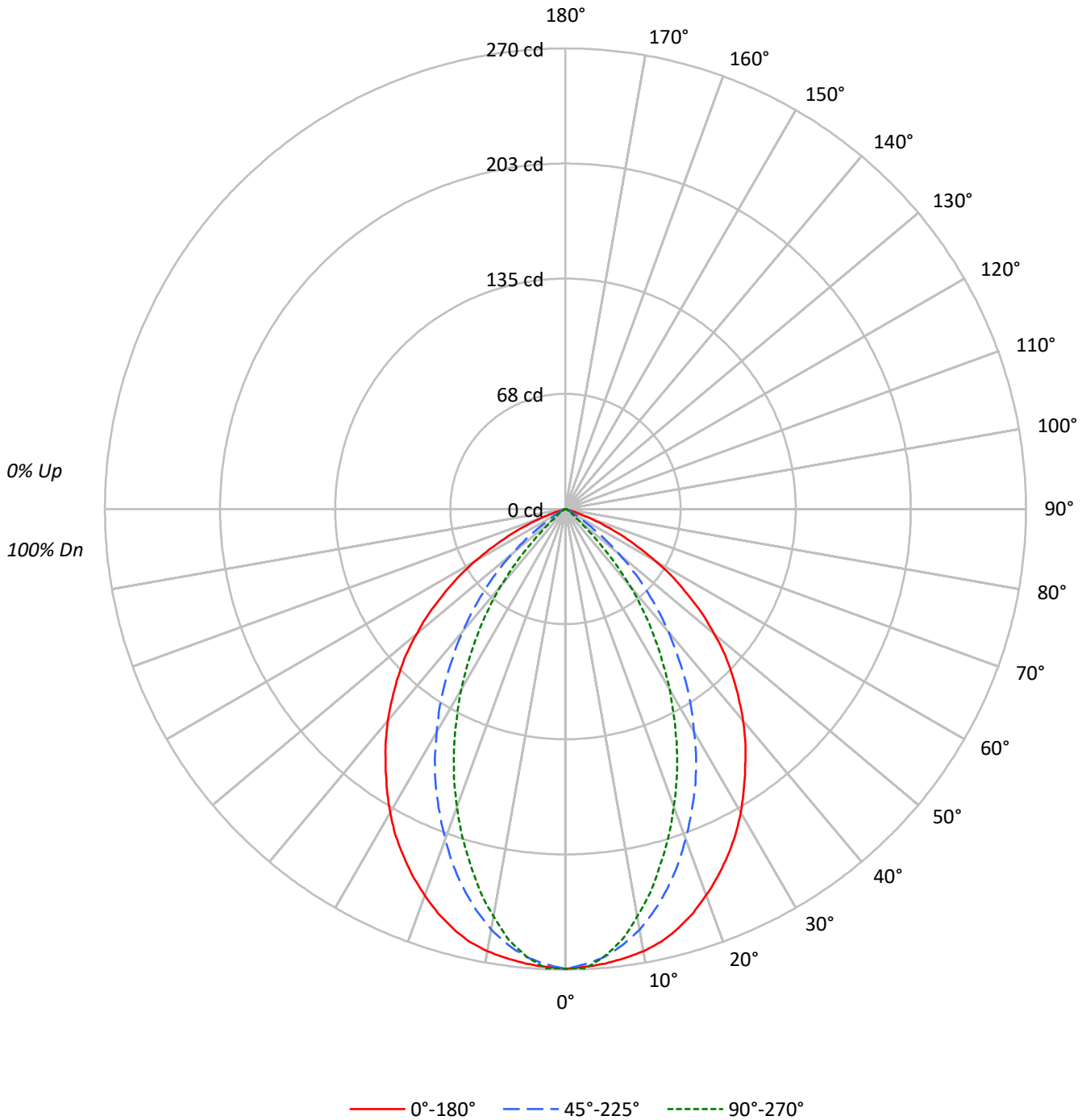
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 351.9 lumens  
Efficiency: N/A  
Efficacy: 30.1 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: P1060858

CATALOG NUMBER: S124RDR-H350D950-X4F0-XX-UDD-BVL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1060858

CATALOG NUMBER: S124RDR-H350D950-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				
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	96	94	93	91				
2	105	99	95	90	103	98	93	89	94	91	87	91	88	86	88	86	84	82				
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				
4	92	83	76	71	90	82	76	71	79	74	70	77	73	69	75	71	68	66				
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55				
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	47	46				
9	67	56	49	44	66	56	49	44	54	48	44	54	48	44	53	48	44	42				
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39				

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

	0°	45°	90°
0°	2321	2321	2321
5°	2312	2279	2276
10°	2302	2189	2121
15°	2271	2055	1920
20°	2209	1888	1703
25°	2135	1709	1469
30°	2044	1498	1216
35°	1932	1286	946
40°	1821	1056	661
45°	1688	811	328
50°	1523	548	110
55°	1315	281	77
60°	1052	100	53
65°	721	55	24
70°	325	30	20
75°	0	13	13
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1688 cd/sqm



TEST NUMBER: P1060858

CATALOG NUMBER: S124RDR-H350D950-X4F0-XX-UDD-BVL-B

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.9	7.1
10°-20°	65.2	18.5
20°-30°	84.4	24.0
30°-40°	80.2	22.8
40°-50°	56.8	16.1
50°-60°	29.2	8.3
60°-70°	10.2	2.9
70°-80°	0.9	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°	174.6	49.6
0°-40°	254.8	72.4
0°-60°	340.8	96.8
0°-90°	351.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	351.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	270	270	270	270	270	
5°	268	268	264	264	263	25
15°	255	247	230	220	215	72
25°	225	207	180	161	155	103
35°	184	157	122	98	90	115
45°	139	107	67	38	27	107
55°	88	58	19	6	5	78
65°	35	17	3	2	1	35
75°	0	0	0	0	0	3
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P1060858

CATALOG NUMBER: S124RDR-H350D950-X4F0-XX-UDD-BVL-B

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	269.5	269.5	269.5	269.5	269.5
2.5°	268.7	269.5	267.1	269.1	269.5
5°	267.5	267.9	263.6	263.6	263.3
7.5°	265.6	264.8	257.8	255.1	254.7
10°	263.3	260.5	250.4	244.6	242.6
12.5°	259.8	254.7	241.1	232.5	230.2
15°	254.7	246.9	230.5	219.6	215.4
17.5°	248.5	238.3	218.9	205.6	201.3
20°	241.1	228.2	206.0	191.2	185.8
22.5°	233.3	218.5	192.8	176.0	170.6
25°	224.7	207.2	179.9	160.8	154.6
27.5°	215.7	195.1	165.9	146.0	137.9
30°	205.6	183.0	150.7	130.1	122.3
32.5°	194.7	169.8	137.1	114.9	105.5
35°	183.8	156.9	122.3	98.5	90.0
37.5°	173.3	144.9	107.5	82.6	74.4
40°	162.0	131.6	93.9	68.2	58.8
42.5°	150.3	118.8	79.8	53.4	43.2
45°	138.6	106.7	66.6	38.2	26.9
47.5°	127.0	93.9	53.7	24.1	14.4
50°	113.7	81.4	40.9	12.9	8.2
52.5°	101.3	69.7	29.2	7.4	6.2
55°	87.6	57.6	18.7	5.5	5.1
57.5°	74.8	46.0	10.5	4.3	3.9
60°	61.1	35.4	5.8	3.5	3.1
62.5°	47.5	25.7	3.9	2.3	1.9
65°	35.4	17.1	2.7	1.6	1.2
67.5°	23.4	9.7	1.9	0.8	0.8
70°	12.9	4.7	1.2	0.8	0.8
72.5°	4.7	1.6	0.8	0.4	0.4
75°	0.0	0.4	0.4	0.4	0.4
77.5°	0.0	0.0	0.0	0.0	0.4
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: P1060858  
 CATALOG NUMBER: S124RDR-H350D950-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	11.46	12.71	11.82	13.03	13.34	0.00	0.00	0.00	0.00	0.00
	3H	11.74	12.84	12.12	13.17	13.54	0.00	0.00	0.00	0.00	0.00
	4H	11.66	12.68	12.06	13.04	13.42	0.00	0.00	0.00	0.00	0.00
	6H	11.57	12.51	11.99	12.88	13.28	0.00	0.00	0.00	0.00	0.00
	8H	11.53	12.41	11.96	12.80	13.21	0.00	0.00	0.00	0.00	0.00
	12H	11.48	12.33	11.91	12.71	13.14	0.00	0.00	0.00	0.00	0.00
4H	2H	11.23	12.26	11.64	12.61	12.99	0.00	0.00	0.00	0.00	0.00
	3H	11.52	12.34	11.93	12.75	13.15	0.00	0.00	0.00	0.00	0.00
	4H	11.42	12.16	11.86	12.58	13.02	0.00	0.00	0.00	0.00	0.00
	6H	11.34	11.97	11.80	12.41	12.88	0.00	0.00	0.00	0.00	0.00
	8H	11.27	11.86	11.75	12.31	12.78	0.00	0.00	0.00	0.00	0.00
	12H	11.22	11.74	11.71	12.22	12.70	0.00	0.00	0.00	0.00	0.00
8H	4H	11.27	11.86	11.75	12.31	12.78	0.00	0.00	0.00	0.00	0.00
	6H	11.17	11.64	11.67	12.14	12.62	0.00	0.00	0.00	0.00	0.00
	8H	11.10	11.53	11.62	12.04	12.54	0.00	0.00	0.00	0.00	0.00
	12H	11.05	11.43	11.57	11.92	12.50	0.00	0.00	0.00	0.00	0.00
12H	4H	11.22	11.74	11.71	12.22	12.70	0.00	0.00	0.00	0.00	0.00
	6H	11.10	11.53	11.62	12.04	12.54	0.00	0.00	0.00	0.00	0.00
	8H	11.05	11.43	11.57	11.92	12.50	0.00	0.00	0.00	0.00	0.00