

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: P1060861

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060861  
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-H350D950-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: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

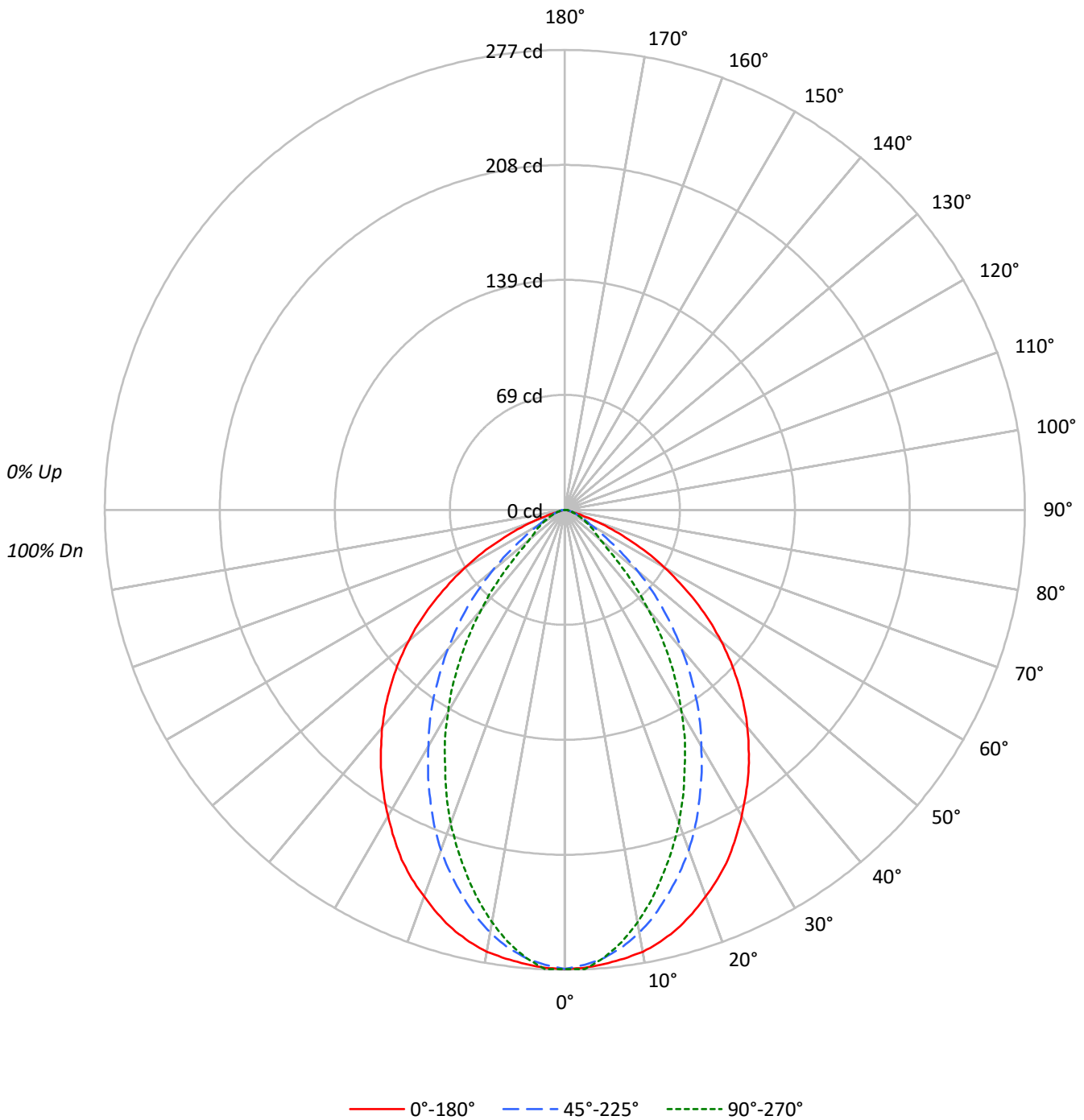
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 407.7 lumens  
Efficiency: N/A  
Efficacy: 34.8 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

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### Luminous Intensity Polar Plot





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**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°	2381	2381	2381
5°	2373	2343	2340
10°	2363	2261	2206
15°	2329	2139	2031
20°	2270	1999	1841
25°	2209	1824	1621
30°	2118	1634	1398
35°	2027	1445	1154
40°	1922	1230	876
45°	1797	1006	588
50°	1644	762	366
55°	1444	503	309
60°	1194	308	255
65°	864	238	206
70°	471	176	156
75°	103	130	143
80°	79	94	114
85°	79	79	119

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 1797 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.6	6.3
10°-20°	68.0	16.7
20°-30°	90.1	22.1
30°-40°	89.5	21.9
40°-50°	68.8	16.9
50°-60°	41.0	10.1
60°-70°	18.7	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°	183.8	45.1
0°-40°	273.2	67.0
0°-60°	383.1	94.0
0°-90°	407.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	407.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	276	276	276	276	276	
5°	274	275	271	271	271	26
15°	261	255	240	232	228	74
25°	232	216	192	176	171	107
35°	193	169	138	116	110	120
45°	148	119	83	58	48	114
55°	96	68	34	21	21	86
65°	42	25	12	10	10	43
75°	3	4	4	4	4	7
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	276.5	276.5	276.5	276.5	276.5
2.5°	276.1	276.5	274.2	276.1	276.9
5°	274.5	274.9	271.0	271.0	270.7
7.5°	272.6	271.8	265.6	263.3	262.5
10°	270.3	267.5	258.6	253.9	252.3
12.5°	266.4	262.1	250.0	243.4	240.7
15°	261.3	254.7	239.9	231.7	227.8
17.5°	255.1	246.9	229.4	218.9	214.6
20°	247.7	236.8	218.1	204.8	200.9
22.5°	240.7	227.0	205.6	190.4	186.1
25°	232.5	215.7	192.0	176.0	170.6
27.5°	222.8	204.8	178.4	162.0	156.5
30°	213.0	193.2	164.3	147.2	140.6
32.5°	202.9	181.1	151.5	132.0	125.8
35°	192.8	168.6	137.5	116.4	109.8
37.5°	181.9	156.2	123.4	101.6	94.2
40°	171.0	144.1	109.4	87.2	77.9
42.5°	159.7	131.6	95.8	72.4	63.1
45°	147.6	118.8	82.6	57.6	48.3
47.5°	135.5	106.7	69.3	43.2	34.7
50°	122.7	93.9	56.9	31.5	27.3
52.5°	109.8	81.4	44.4	24.5	23.4
55°	96.2	68.5	33.5	21.0	20.6
57.5°	82.2	56.9	24.1	18.3	17.5
60°	69.3	46.0	17.9	15.6	14.8
62.5°	56.1	34.7	14.8	12.9	12.1
65°	42.4	25.3	11.7	10.1	10.1
67.5°	30.8	17.1	9.3	8.2	7.8
70°	18.7	10.5	7.0	6.6	6.2
72.5°	9.3	6.2	5.5	5.1	5.1
75°	3.1	3.9	3.9	4.3	4.3
77.5°	2.3	2.7	2.7	3.1	3.1
80°	1.6	1.9	1.9	2.3	2.3
82.5°	1.2	1.2	1.6	1.6	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

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**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	12.14	13.47	12.50	13.78	14.10	3.68	5.01	4.05	5.33	5.64
	3H	12.65	13.83	13.03	14.16	14.52	4.50	5.68	4.88	6.01	6.37
	4H	12.61	13.71	13.01	14.06	14.44	4.78	5.88	5.19	6.23	6.62
	6H	12.55	13.55	12.96	13.92	14.32	4.95	5.96	5.37	6.33	6.72
	8H	12.51	13.46	12.94	13.85	14.26	5.01	5.97	5.44	6.36	6.76
	12H	12.47	13.38	12.90	13.76	14.20	5.06	5.97	5.49	6.35	6.78
4H	2H	11.98	13.08	12.38	13.43	13.81	4.12	5.22	4.53	5.57	5.96
	3H	12.53	13.43	12.95	13.83	14.23	5.09	5.98	5.50	6.39	6.79
	4H	12.50	13.30	12.94	13.72	14.16	5.46	6.25	5.89	6.67	7.11
	6H	12.45	13.13	12.91	13.58	14.05	5.70	6.39	6.16	6.83	7.30
	8H	12.40	13.04	12.87	13.49	13.96	5.79	6.43	6.26	6.87	7.34
	12H	12.36	12.93	12.85	13.41	13.89	5.86	6.43	6.35	6.91	7.39
8H	4H	12.39	13.03	12.86	13.48	13.95	5.54	6.18	6.01	6.63	7.10
	6H	12.33	12.85	12.83	13.35	13.83	5.85	6.37	6.35	6.86	7.35
	8H	12.28	12.75	12.80	13.27	13.76	5.98	6.45	6.50	6.96	7.45
	12H	12.25	12.66	12.77	13.16	13.73	6.12	6.53	6.63	7.03	7.60
12H	4H	12.35	12.91	12.83	13.40	13.87	5.52	6.08	6.00	6.56	7.04
	6H	12.27	12.74	12.79	13.26	13.75	5.83	6.29	6.35	6.81	7.30
	8H	12.25	12.66	12.76	13.16	13.73	6.00	6.41	6.51	6.91	7.48