

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: P1060799

Luminaire Tested: S124RDR-H350D835-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060799  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-77)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H350D835-X4F0-XX-UDD-SVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

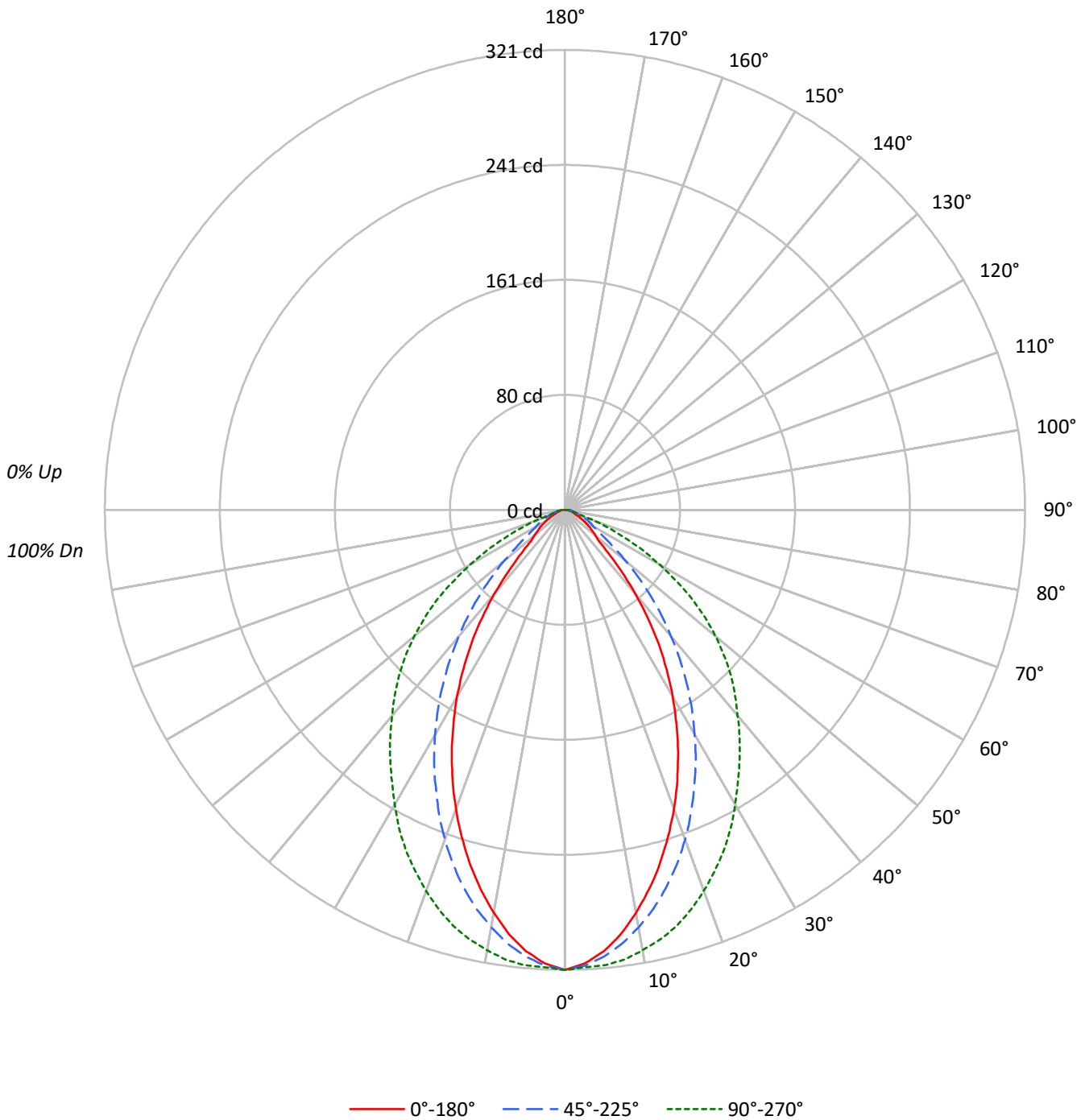
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 451.6 lumens  
Efficiency: N/A  
Efficacy: 38.6 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
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	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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																																				
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79																																				
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70																																				
4	90	80	73	68	88	79	72	67	77	71	67	75	70	66	73	68	65	63																																				
5	84	73	66	61	82	72	65	60	70	64	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	49	47																																				
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	45	43																																				
9	65	54	46	42	64	53	46	42	52	46	41	51	45	41	50	45	41	39																																				
10	62	50	43	39	61	50	43	38	49	43	38	48	42	38	47	42	38	36																																				

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

	0°	45°	90°
0°	2765	2765	2765
5°	2674	2706	2758
10°	2497	2586	2729
15°	2280	2433	2681
20°	2037	2246	2594
25°	1774	2027	2492
30°	1495	1800	2361
35°	1194	1559	2234
40°	859	1295	2108
45°	518	1021	1995
50°	372	739	1834
55°	312	497	1626
60°	253	394	1309
65°	200	359	941
70°	174	297	504
75°	163	273	246
80°	164	283	223
85°	247	405	287

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1995 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.5	6.5
10°-20°	77.2	17.1
20°-30°	100.2	22.2
30°-40°	96.3	21.3
40°-50°	71.5	15.8
50°-60°	43.8	9.7
60°-70°	21.3	4.7
70°-80°	8.1	1.8
80°-90°	3.7	0.8
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°	206.9	45.8
0°-40°	303.3	67.2
0°-60°	418.6	92.7
0°-90°	451.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	451.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	321	321	321	321	321	
5°	309	314	313	316	319	29
15°	256	263	273	289	301	71
25°	187	196	213	241	262	85
35°	114	124	148	183	212	70
45°	42	53	84	128	164	35
55°	21	22	33	75	108	19
65°	10	11	18	28	46	10
75°	5	8	8	7	7	5
85°	2	4	4	4	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	321.1	321.1	321.1	321.1	321.1
2.5°	317.0	320.7	318.3	319.1	319.5
5°	309.3	313.8	313.0	315.8	319.1
7.5°	298.7	304.0	305.6	311.3	316.6
10°	285.6	292.1	295.8	305.2	312.1
12.5°	271.3	278.2	285.2	297.8	307.2
15°	255.8	263.1	272.9	289.3	300.7
17.5°	239.4	247.6	259.4	279.1	292.5
20°	222.3	230.8	245.1	266.8	283.1
22.5°	204.7	213.7	229.6	253.7	272.9
25°	186.7	196.1	213.3	240.6	262.3
27.5°	168.3	178.1	197.7	226.8	250.5
30°	150.4	159.8	181.0	212.5	237.4
32.5°	132.0	141.8	164.7	197.7	224.7
35°	113.6	123.8	148.3	183.4	212.5
37.5°	94.8	105.8	131.6	169.6	200.2
40°	76.4	87.0	115.2	155.3	187.5
42.5°	58.4	69.9	99.7	141.0	175.7
45°	42.5	53.1	83.8	127.9	163.8
47.5°	31.9	38.4	69.0	115.6	150.8
50°	27.8	29.0	55.2	102.1	136.9
52.5°	24.1	24.9	42.9	87.4	123.0
55°	20.8	21.7	33.1	74.8	108.3
57.5°	17.6	18.4	26.6	62.5	91.5
60°	14.7	15.5	22.9	49.8	76.0
62.5°	12.3	12.7	20.4	38.0	60.9
65°	9.8	10.6	17.6	27.8	46.2
67.5°	8.2	9.0	14.3	19.2	32.3
70°	6.9	9.0	11.8	13.5	20.0
72.5°	5.7	8.2	9.8	9.4	9.4
75°	4.9	7.8	8.2	7.4	7.4
77.5°	4.1	6.9	6.5	6.1	5.7
80°	3.3	5.7	5.7	4.9	4.5
82.5°	2.9	4.5	4.5	4.5	3.7
85°	2.5	4.1	4.1	3.7	2.9
87.5°	1.6	3.3	3.7	3.3	2.0
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	3.35	4.69	3.72	5.00	5.32	12.44	13.78	12.81	14.10	14.41
	3H	4.40	5.58	4.78	5.91	6.28	12.95	14.13	13.33	14.46	14.83
	4H	4.91	6.02	5.31	6.37	6.75	12.96	14.07	13.36	14.42	14.80
	6H	5.36	6.38	5.78	6.75	7.14	12.96	13.98	13.37	14.35	14.74
	8H	5.56	6.52	5.99	6.91	7.32	12.96	13.92	13.39	14.31	14.72
	12H	5.78	6.70	6.21	7.08	7.51	12.96	13.88	13.39	14.26	14.69
4H	2H	4.45	5.55	4.85	5.91	6.29	12.33	13.44	12.74	13.79	14.17
	3H	5.72	6.62	6.13	7.03	7.43	12.91	13.82	13.33	14.22	14.62
	4H	6.42	7.23	6.86	7.65	8.10	12.96	13.77	13.40	14.19	14.63
	6H	7.05	7.75	7.52	8.20	8.66	13.01	13.71	13.48	14.16	14.62
	8H	7.30	7.95	7.77	8.40	8.87	13.03	13.68	13.50	14.13	14.60
	12H	7.58	8.16	8.07	8.64	9.12	13.06	13.64	13.55	14.13	14.60
8H	4H	6.85	7.50	7.32	7.95	8.42	12.91	13.56	13.38	14.01	14.48
	6H	7.72	8.26	8.22	8.75	9.23	13.00	13.54	13.50	14.03	14.52
	8H	8.13	8.61	8.65	9.13	9.62	13.06	13.55	13.59	14.06	14.55
	12H	8.62	9.04	9.13	9.54	10.11	13.17	13.59	13.68	14.09	14.66
12H	4H	6.89	7.47	7.38	7.95	8.43	12.88	13.46	13.37	13.94	14.42
	6H	7.83	8.32	8.35	8.83	9.32	12.98	13.46	13.50	13.98	14.47
	8H	8.35	8.78	8.87	9.27	9.85	13.09	13.51	13.60	14.01	14.58