

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: P1060790

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

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060790  
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-H350D830-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: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

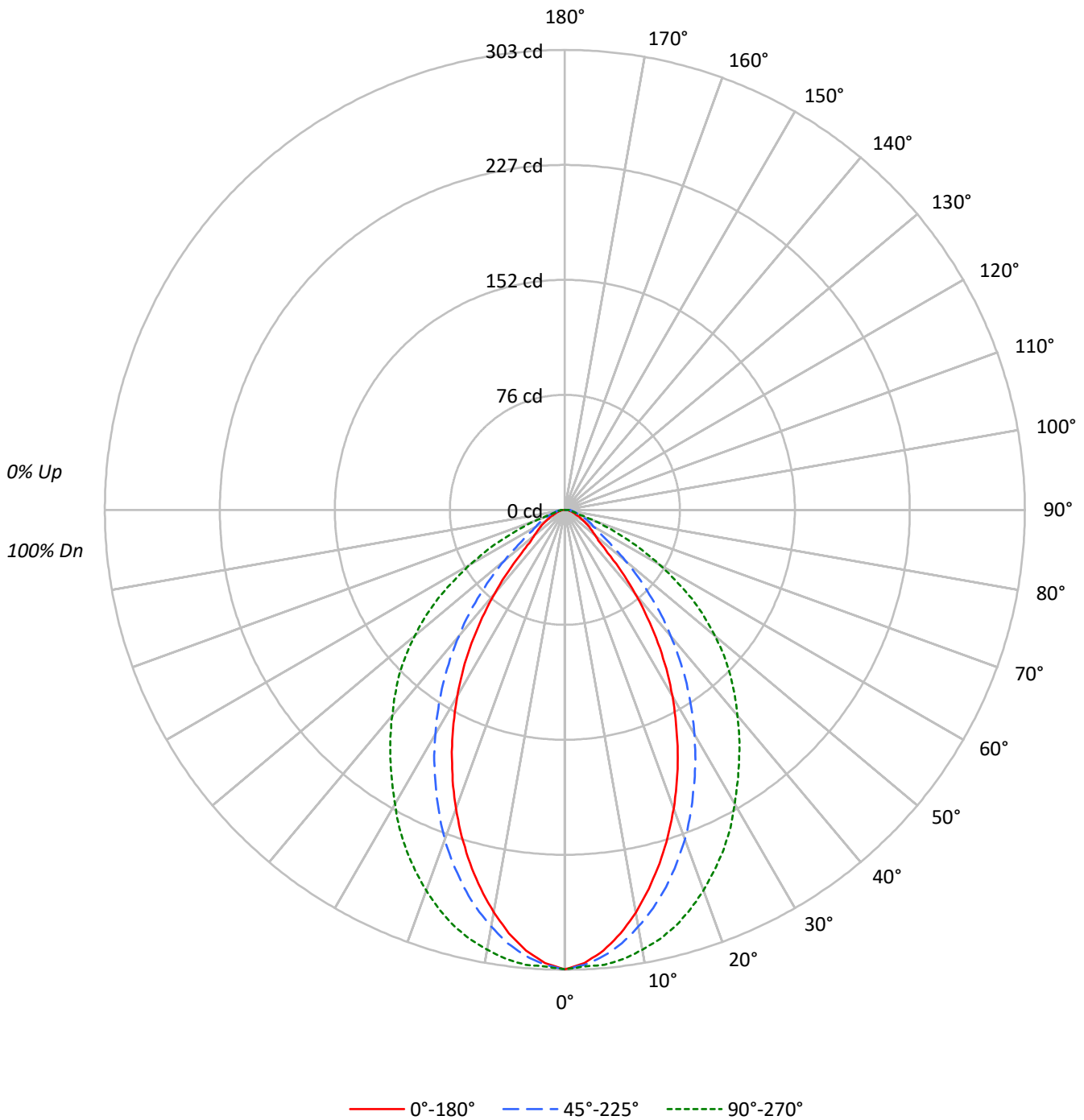
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 425.6 lumens  
Efficiency: N/A  
Efficacy: 36.4 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79				79
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	70				70
4	90	80	73	68	88	79	72	67	77	71	67	75	70	66	73	68	65	63				63
5	84	73	66	61	82	72	65	60	70	64	60	69	63	59	67	62	59	57				57
6	79	68	60	55	77	67	60	54	65	59	54	63	58	54	62	57	53	51				51
7	74	62	55	50	72	62	54	49	60	54	49	59	53	49	58	52	49	47				47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	45	43				43
9	65	54	46	42	64	53	46	42	52	46	41	51	45	41	50	45	41	39				39
10	62	50	43	39	61	50	43	38	49	43	38	48	42	38	47	42	38	36				36

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

	0°	45°	90°
0°	2607	2607	2607
5°	2520	2550	2600
10°	2354	2438	2572
15°	2149	2293	2526
20°	1920	2118	2446
25°	1672	1910	2349
30°	1409	1696	2224
35°	1126	1470	2105
40°	809	1221	1987
45°	487	961	1880
50°	351	697	1728
55°	294	468	1531
60°	239	372	1233
65°	187	338	886
70°	164	282	476
75°	153	256	230
80°	154	268	208
85°	227	385	267

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1880 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.8	6.5
10°-20°	72.8	17.1
20°-30°	94.5	22.2
30°-40°	90.8	21.3
40°-50°	67.4	15.8
50°-60°	41.3	9.7
60°-70°	20.1	4.7
70°-80°	7.6	1.8
80°-90°	3.4	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°	195.1	45.8
0°-40°	285.9	67.2
0°-60°	394.5	92.7
0°-90°	425.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	425.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	303	303	303	303	303	
5°	292	296	295	298	301	27
15°	241	248	257	273	283	67
25°	176	185	201	227	247	80
35°	107	117	140	173	200	66
45°	40	50	79	120	154	33
55°	20	20	31	70	102	18
65°	9	10	17	26	44	10
75°	5	7	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°	302.7	302.7	302.7	302.7	302.7
2.5°	298.8	302.3	300.0	300.8	301.1
5°	291.5	295.8	295.0	297.7	300.8
7.5°	281.5	286.5	288.1	293.4	298.4
10°	269.2	275.3	278.8	287.7	294.2
12.5°	255.7	262.2	268.8	280.7	289.6
15°	241.1	248.0	257.2	272.6	283.4
17.5°	225.7	233.4	244.5	263.0	275.7
20°	209.5	217.6	231.1	251.5	266.9
22.5°	192.9	201.4	216.4	239.1	257.2
25°	176.0	184.8	201.0	226.8	247.2
27.5°	158.7	167.9	186.4	213.7	236.1
30°	141.7	150.6	170.6	200.2	223.7
32.5°	124.4	133.6	155.2	186.4	211.8
35°	107.1	116.7	139.8	172.9	200.2
37.5°	89.3	99.7	124.0	159.8	188.7
40°	72.0	82.0	108.6	146.3	176.8
42.5°	55.1	65.9	94.0	132.9	165.6
45°	40.0	50.1	78.9	120.5	154.4
47.5°	30.0	36.2	65.1	109.0	142.1
50°	26.2	27.3	52.0	96.3	129.0
52.5°	22.7	23.5	40.4	82.4	115.9
55°	19.6	20.4	31.2	70.5	102.0
57.5°	16.6	17.3	25.0	58.9	86.3
60°	13.9	14.6	21.6	47.0	71.6
62.5°	11.6	11.9	19.3	35.8	57.4
65°	9.2	10.0	16.6	26.2	43.5
67.5°	7.7	8.5	13.5	18.1	30.4
70°	6.5	8.5	11.2	12.7	18.9
72.5°	5.4	7.7	9.2	8.9	8.9
75°	4.6	7.3	7.7	6.9	6.9
77.5°	3.9	6.5	6.2	5.8	5.4
80°	3.1	5.4	5.4	4.6	4.2
82.5°	2.7	4.2	4.2	4.2	3.5
85°	2.3	3.9	3.9	3.5	2.7
87.5°	1.5	3.1	3.5	3.1	1.9
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	3.13	4.47	3.50	4.79	5.10	12.24	13.58	12.61	13.89	14.21
	3H	4.18	5.37	4.56	5.70	6.06	12.74	13.93	13.12	14.26	14.62
	4H	4.70	5.80	5.10	6.15	6.54	12.76	13.86	13.16	14.21	14.60
	6H	5.15	6.17	5.57	6.54	6.93	12.75	13.77	13.17	14.14	14.53
	8H	5.34	6.31	5.77	6.70	7.10	12.75	13.71	13.18	14.11	14.51
	12H	5.56	6.48	5.99	6.86	7.29	12.75	13.67	13.18	14.05	14.48
4H	2H	4.24	5.34	4.64	5.69	6.08	12.13	13.24	12.53	13.59	13.97
	3H	5.51	6.41	5.92	6.82	7.22	12.71	13.61	13.12	14.02	14.42
	4H	6.21	7.02	6.64	7.44	7.88	12.75	13.56	13.19	13.98	14.43
	6H	6.84	7.54	7.31	7.99	8.45	12.81	13.51	13.27	13.95	14.42
	8H	7.09	7.74	7.56	8.19	8.66	12.82	13.48	13.29	13.92	14.39
	12H	7.36	7.94	7.85	8.42	8.90	12.86	13.44	13.34	13.92	14.39
8H	4H	6.64	7.29	7.11	7.74	8.21	12.70	13.36	13.17	13.80	14.27
	6H	7.52	8.05	8.02	8.55	9.03	12.80	13.33	13.30	13.83	14.31
	8H	7.92	8.40	8.44	8.92	9.41	12.86	13.34	13.38	13.85	14.34
	12H	8.40	8.83	8.92	9.32	9.89	12.96	13.38	13.47	13.88	14.45
12H	4H	6.68	7.26	7.17	7.74	8.22	12.68	13.25	13.16	13.74	14.21
	6H	7.63	8.11	8.15	8.62	9.11	12.78	13.26	13.30	13.77	14.26
	8H	8.14	8.57	8.66	9.06	9.63	12.88	13.31	13.39	13.80	14.37