

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060809

Luminaire Tested: S124RDRP-H350D840-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060809  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-74)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDRP-H350D840-X4F0-XX-UDD-SVL-W  
Description: DEFINE 4 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

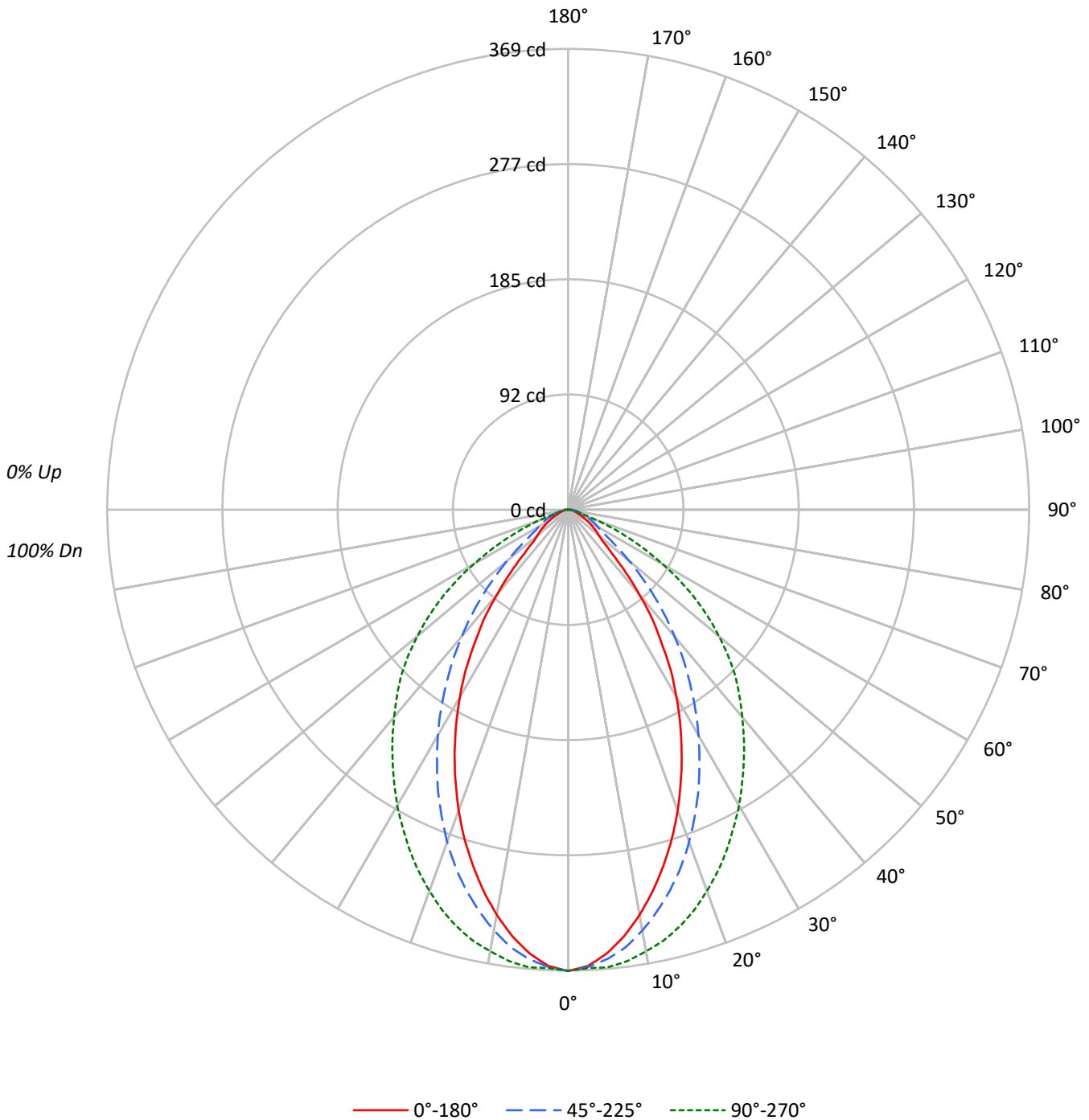
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 522.8 lumens  
Efficiency: N/A  
Efficacy: 44.7 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 (A<sub>in</sub>): 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	111	108	104	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	66	75	70	66	73	68	65	63
5	84	73	66	60	82	72	65	60	70	64	60	69	63	59	67	62	58	57
6	79	67	60	54	77	67	59	54	65	59	54	63	58	53	62	57	53	51
7	74	62	55	49	72	61	54	49	60	54	49	59	53	49	57	52	48	47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	49	42	38	48	42	38	47	42	38	36

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

	0°	45°	90°
0°	3180	3180	3180
5°	3082	3121	3178
10°	2879	2991	3139
15°	2627	2811	3079
20°	2349	2594	2976
25°	2043	2345	2854
30°	1723	2076	2720
35°	1371	1787	2577
40°	997	1489	2436
45°	603	1176	2307
50°	431	852	2111
55°	365	577	1865
60°	298	468	1507
65°	236	420	1084
70°	196	352	572
75°	180	329	289
80°	183	327	288
85°	247	494	326

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2307 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.0	6.5
10°-20°	89.1	17.0
20°-30°	115.6	22.1
30°-40°	111.2	21.3
40°-50°	82.8	15.8
50°-60°	50.9	9.7
60°-70°	25.0	4.8
70°-80°	9.8	1.9
80°-90°	4.5	0.9
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°	238.7	45.7
0°-40°	349.9	66.9
0°-60°	483.6	92.5
0°-90°	522.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	522.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	369	369	369	369	369	
5°	357	362	361	364	368	33
15°	295	304	315	334	345	82
25°	215	227	247	278	300	98
35°	130	143	170	212	245	81
45°	50	62	97	149	189	41
55°	24	25	38	88	124	22
65°	12	12	21	33	53	12
75°	5	10	10	9	9	6
85°	2	4	5	5	3	3
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	369.3	369.3	369.3	369.3	369.3
2.5°	365.6	369.8	366.5	366.9	367.3
5°	356.6	361.9	361.1	364.4	367.7
7.5°	344.2	350.4	353.3	359.9	364.4
10°	329.3	336.3	342.1	352.8	359.0
12.5°	312.8	321.1	329.3	343.8	353.3
15°	294.7	304.1	315.3	334.3	345.4
17.5°	276.1	285.6	300.0	321.9	335.9
20°	256.3	266.6	283.1	307.4	324.8
22.5°	235.6	246.8	264.9	292.6	313.2
25°	215.0	226.6	246.8	277.7	300.4
27.5°	194.4	205.5	227.4	262.1	286.8
30°	173.3	184.9	208.8	245.1	273.6
32.5°	153.1	163.8	189.4	229.0	259.2
35°	130.4	142.8	170.0	212.5	245.1
37.5°	111.0	122.2	151.5	196.0	231.1
40°	88.7	101.1	132.5	179.9	216.7
42.5°	68.1	80.5	114.3	163.8	203.0
45°	49.5	61.5	96.6	149.0	189.4
47.5°	37.6	44.6	79.2	134.5	174.1
50°	32.2	34.3	63.6	118.9	157.6
52.5°	28.5	29.3	49.5	103.2	141.1
55°	24.3	25.2	38.4	87.5	124.2
57.5°	20.6	21.0	31.0	72.6	106.1
60°	17.3	17.7	27.2	58.2	87.5
62.5°	14.4	14.9	24.3	45.0	69.7
65°	11.6	12.4	20.6	33.0	53.2
67.5°	9.5	11.1	17.3	23.1	37.1
70°	7.8	10.7	14.0	16.1	22.7
72.5°	6.6	9.9	12.0	11.6	11.1
75°	5.4	9.5	9.9	9.1	8.7
77.5°	4.5	8.3	8.3	7.4	7.0
80°	3.7	6.6	6.6	6.6	5.8
82.5°	3.3	5.4	5.8	5.8	4.5
85°	2.5	4.5	5.0	5.0	3.3
87.5°	1.7	4.1	4.5	4.1	2.5
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	3.79	5.13	4.15	5.44	5.76	12.97	14.31	13.34	14.63	14.94
	3H	4.90	6.09	5.28	6.42	6.78	13.48	14.67	13.86	15.00	15.36
	4H	5.42	6.53	5.82	6.88	7.27	13.50	14.61	13.90	14.96	15.34
	6H	5.86	6.88	6.27	7.25	7.64	13.51	14.53	13.92	14.90	15.29
	8H	6.05	7.01	6.48	7.40	7.81	13.51	14.48	13.94	14.87	15.27
	12H	6.23	7.15	6.66	7.54	7.97	13.51	14.44	13.95	14.82	15.25
4H	2H	4.94	6.05	5.34	6.40	6.78	12.86	13.97	13.27	14.32	14.71
	3H	6.28	7.19	6.69	7.59	7.99	13.45	14.36	13.86	14.76	15.17
	4H	7.02	7.83	7.45	8.25	8.69	13.51	14.32	13.95	14.74	15.19
	6H	7.63	8.33	8.09	8.78	9.24	13.59	14.29	14.05	14.74	15.20
	8H	7.87	8.53	8.34	8.97	9.44	13.62	14.27	14.09	14.72	15.19
	12H	8.11	8.69	8.59	9.17	9.65	13.66	14.24	14.14	14.72	15.19
8H	4H	7.49	8.14	7.96	8.59	9.06	13.47	14.13	13.94	14.57	15.04
	6H	8.34	8.88	8.84	9.37	9.85	13.60	14.13	14.10	14.63	15.11
	8H	8.75	9.23	9.27	9.75	10.24	13.68	14.16	14.20	14.68	15.17
	12H	9.17	9.60	9.68	10.09	10.66	13.80	14.23	14.32	14.72	15.29
12H	4H	7.54	8.12	8.03	8.60	9.08	13.44	14.02	13.93	14.51	14.98
	6H	8.47	8.96	8.99	9.47	9.96	13.58	14.06	14.10	14.58	15.07
	8H	9.00	9.43	9.51	9.92	10.49	13.71	14.14	14.23	14.64	15.21