

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: P1060250

Luminaire Tested: S124RDRP-S1020D850-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1060250  
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: S124RDRP-S1020D850-X4F0-XX-UDD-SVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

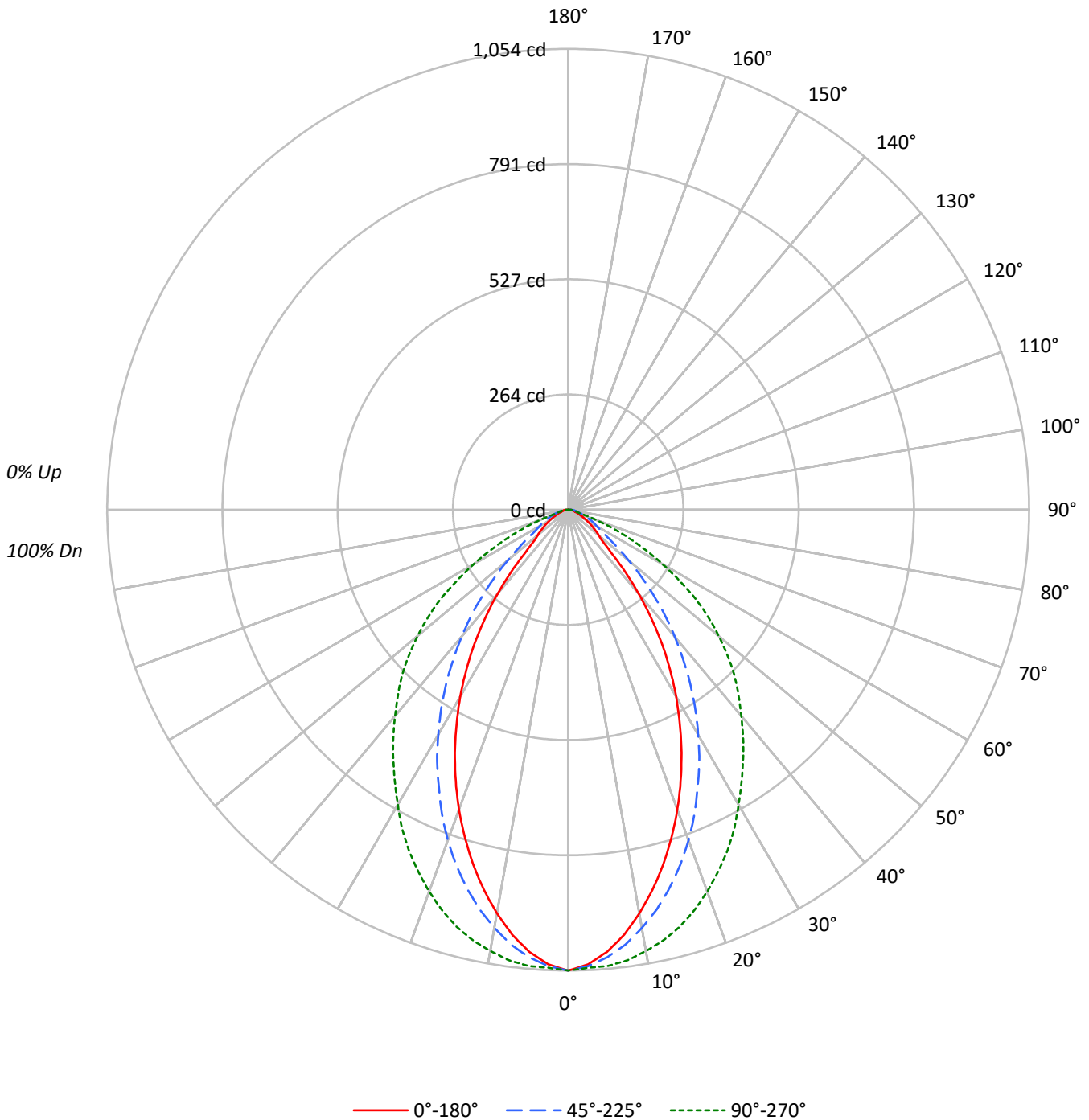
Lumens per Lamp: N/A  
Luminaire Lumens: 1482.1 lumens  
Efficiency: N/A  
Efficacy: 42.3 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 35  
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	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°	9077	9077	9077
5°	8775	8879	9053
10°	8197	8490	8959
15°	7484	7986	8799
20°	6685	7373	8516
25°	5823	6651	8180
30°	4907	5907	7747
35°	3919	5117	7330
40°	2819	4251	6919
45°	1699	3348	6549
50°	1222	2425	6018
55°	1027	1630	5336
60°	832	1293	4295
65°	656	1176	3087
70°	574	979	1654
75°	536	892	802
80°	531	932	734
85°	790	1324	929

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6549 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.8	6.5
10°-20°	253.5	17.1
20°-30°	329.0	22.2
30°-40°	316.2	21.3
40°-50°	234.6	15.8
50°-60°	143.7	9.7
60°-70°	69.8	4.7
70°-80°	26.6	1.8
80°-90°	12.0	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°	679.3	45.8
0°-40°	995.5	67.2
0°-60°	1373.8	92.7
0°-90°	1482.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1482.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1054	1054	1054	1054	1054	
5°	1015	1030	1027	1037	1047	94
15°	840	864	896	950	987	234
25°	613	644	700	790	861	280
35°	373	406	487	602	697	231
45°	140	174	275	420	538	116
55°	68	71	109	245	355	61
65°	32	35	58	91	152	33
75°	16	26	27	24	24	17
85°	8	13	13	12	9	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1054.1	1054.1	1054.1	1054.1	1054.1
2.5°	1040.6	1052.7	1044.7	1047.3	1048.7
5°	1015.2	1029.9	1027.2	1036.6	1047.3
7.5°	980.3	997.7	1003.1	1021.9	1039.3
10°	937.4	958.8	970.9	1001.8	1024.6
12.5°	890.4	913.2	936.0	977.6	1008.5
15°	839.5	863.6	895.8	949.5	987.0
17.5°	785.8	812.7	851.6	915.9	960.2
20°	729.5	757.7	804.6	875.7	929.3
22.5°	671.9	701.4	753.7	832.8	895.8
25°	612.9	643.7	700.0	789.9	860.9
27.5°	552.5	584.7	649.1	744.3	822.1
30°	493.5	524.3	594.1	697.3	779.1
32.5°	433.2	465.3	540.4	649.1	737.6
35°	372.8	406.3	486.8	602.1	697.3
37.5°	311.1	347.3	431.8	556.5	657.1
40°	250.8	285.6	378.2	509.6	615.5
42.5°	191.8	229.3	327.2	462.7	576.6
45°	139.5	174.3	274.9	419.7	537.8
47.5°	104.6	126.1	226.6	379.5	494.8
50°	91.2	95.2	181.0	335.3	449.2
52.5°	79.1	81.8	140.8	287.0	403.7
55°	68.4	71.1	108.6	245.4	355.4
57.5°	57.7	60.3	87.2	205.2	300.4
60°	48.3	51.0	75.1	163.6	249.4
62.5°	40.2	41.6	67.1	124.7	199.8
65°	32.2	34.9	57.7	91.2	151.5
67.5°	26.8	29.5	46.9	63.0	105.9
70°	22.8	29.5	38.9	44.3	65.7
72.5°	18.8	26.8	32.2	30.8	30.8
75°	16.1	25.5	26.8	24.1	24.1
77.5°	13.4	22.8	21.5	20.1	18.8
80°	10.7	18.8	18.8	16.1	14.8
82.5°	9.4	14.8	14.8	14.8	12.1
85°	8.0	13.4	13.4	12.1	9.4
87.5°	5.4	10.7	12.1	10.7	6.7
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	7.47	8.81	7.84	9.12	9.44	16.58	17.92	16.94	18.23	18.54
	3H	8.52	9.71	8.90	10.04	10.40	17.08	18.27	17.46	18.60	18.96
	4H	9.03	10.14	9.44	10.49	10.87	17.09	18.20	17.49	18.55	18.93
	6H	9.48	10.50	9.90	10.87	11.27	17.09	18.11	17.50	18.48	18.87
	8H	9.68	10.64	10.11	11.03	11.43	17.09	18.05	17.52	18.44	18.85
	12H	9.89	10.81	10.32	11.19	11.62	17.09	18.01	17.52	18.39	18.82
4H	2H	8.57	9.68	8.97	10.03	10.41	16.47	17.57	16.87	17.92	18.31
	3H	9.84	10.75	10.25	11.15	11.55	17.04	17.95	17.46	18.35	18.76
	4H	10.55	11.36	10.98	11.78	12.22	17.09	17.90	17.52	18.32	18.76
	6H	11.18	11.88	11.64	12.32	12.79	17.14	17.84	17.61	18.29	18.75
	8H	11.42	12.08	11.89	12.52	12.99	17.16	17.81	17.63	18.26	18.73
	12H	11.70	12.28	12.18	12.76	13.23	17.19	17.77	17.68	18.25	18.73
8H	4H	10.97	11.63	11.44	12.07	12.54	17.04	17.69	17.51	18.14	18.61
	6H	11.85	12.39	12.35	12.88	13.36	17.13	17.67	17.64	18.16	18.65
	8H	12.26	12.74	12.78	13.26	13.75	17.19	17.68	17.72	18.19	18.68
	12H	12.74	13.16	13.25	13.66	14.23	17.29	17.72	17.81	18.22	18.79
12H	4H	11.02	11.60	11.50	12.08	12.55	17.01	17.59	17.50	18.07	18.55
	6H	11.96	12.45	12.49	12.96	13.45	17.11	17.59	17.63	18.11	18.60
	8H	12.48	12.91	13.00	13.40	13.97	17.22	17.64	17.73	18.14	18.71