

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: P1060655

Luminaire Tested: S124RDR-H1020D850-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060655
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-H1020D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

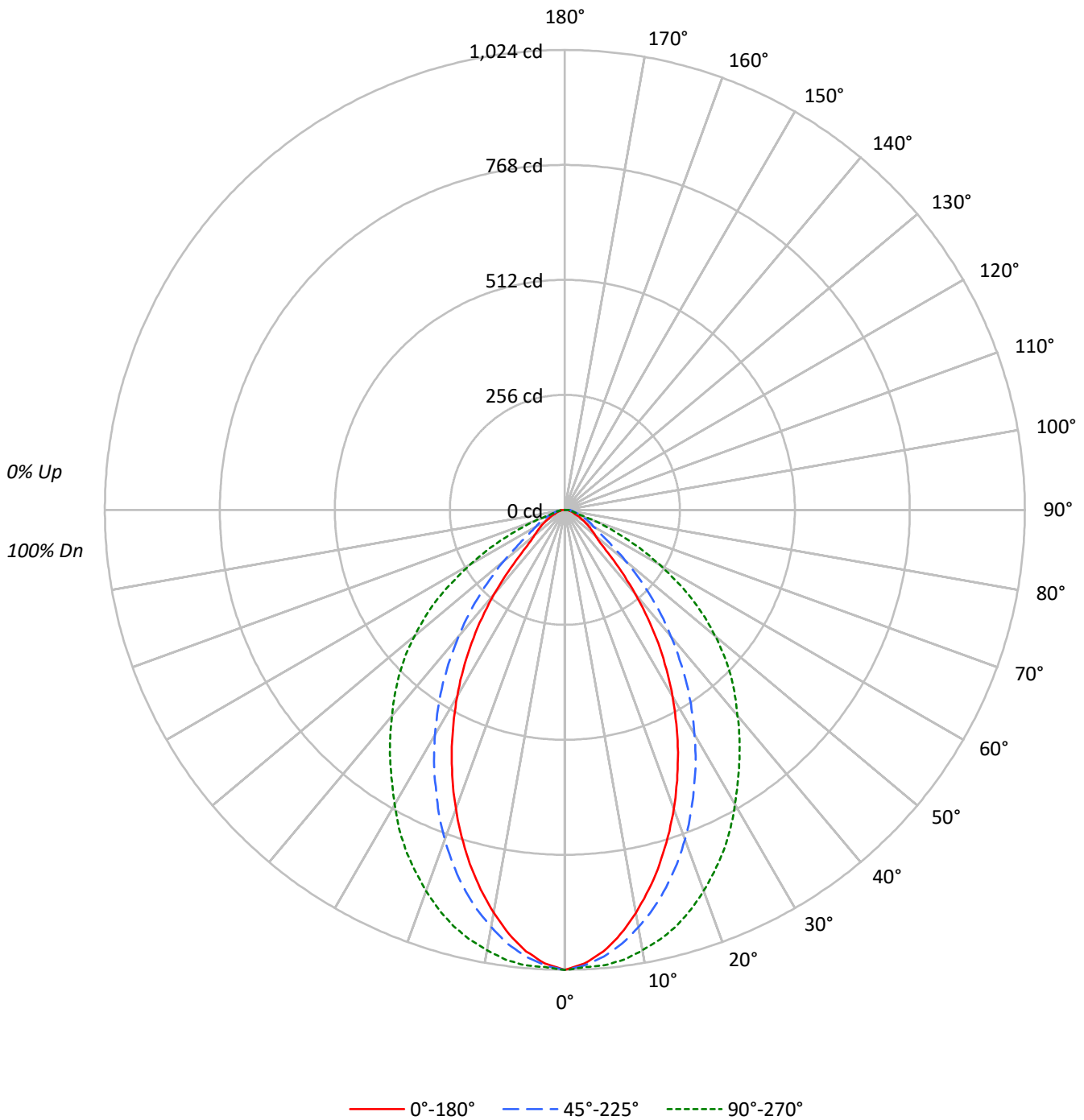
Lumens per Lamp: N/A
Luminaire Lumens: 1440.4 lumens
Efficiency: N/A
Efficacy: 46.2 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.12 / 1.01
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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	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	47	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°	8820	8820	8820
5°	8528	8629	8798
10°	7966	8250	8706
15°	7273	7761	8551
20°	6497	7165	8276
25°	5659	6464	7950
30°	4769	5740	7529
35°	3809	4973	7124
40°	2739	4131	6724
45°	1650	3254	6364
50°	1187	2356	5849
55°	998	1585	5186
60°	808	1257	4175
65°	638	1141	3001
70°	559	952	1609
75°	519	868	782
80°	516	903	709
85°	771	1284	899

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 6364 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.0	6.5
10°-20°	246.4	17.1
20°-30°	319.7	22.2
30°-40°	307.3	21.3
40°-50°	228.0	15.8
50°-60°	139.7	9.7
60°-70°	67.8	4.7
70°-80°	25.8	1.8
80°-90°	11.6	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°	660.1	45.8
0°-40°	967.4	67.2
0°-60°	1335.1	92.7
0°-90°	1440.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1440.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1024	1024	1024	1024	1024	
5°	987	1001	998	1007	1018	92
15°	816	839	871	923	959	228
25°	596	626	680	768	837	272
35°	362	395	473	585	678	224
45°	136	169	267	408	523	112
55°	66	69	106	238	345	60
65°	31	34	56	89	147	32
75°	16	25	26	24	24	17
85°	8	13	13	12	9	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1024.3	1024.3	1024.3	1024.3	1024.3
2.5°	1011.3	1023.0	1015.2	1017.8	1019.1
5°	986.6	1000.9	998.3	1007.4	1017.8
7.5°	952.7	969.6	974.8	993.1	1010.0
10°	911.0	931.8	943.5	973.5	995.7
12.5°	865.4	887.5	909.7	950.1	980.0
15°	815.8	839.3	870.6	922.7	959.2
17.5°	763.7	789.8	827.6	890.1	933.1
20°	709.0	736.3	781.9	851.0	903.1
22.5°	652.9	681.6	732.4	809.3	870.6
25°	595.6	625.6	680.3	767.6	836.7
27.5°	536.9	568.2	630.8	723.3	798.9
30°	479.6	509.6	577.3	677.7	757.2
32.5°	420.9	452.2	525.2	630.8	716.8
35°	362.3	394.9	473.1	585.2	677.7
37.5°	302.4	337.5	419.6	540.8	638.6
40°	243.7	277.6	367.5	495.2	598.2
42.5°	186.4	222.9	318.0	449.6	560.4
45°	135.5	169.4	267.2	407.9	522.6
47.5°	101.7	122.5	220.2	368.8	480.9
50°	88.6	92.5	175.9	325.8	436.6
52.5°	76.9	79.5	136.8	278.9	392.3
55°	66.5	69.1	105.6	238.5	345.4
57.5°	56.0	58.6	84.7	199.4	291.9
60°	46.9	49.5	73.0	159.0	242.4
62.5°	39.1	40.4	65.2	121.2	194.2
65°	31.3	33.9	56.0	88.6	147.3
67.5°	26.1	28.7	45.6	61.3	103.0
70°	22.2	28.7	37.8	43.0	63.9
72.5°	18.2	26.1	31.3	30.0	30.0
75°	15.6	24.8	26.1	23.5	23.5
77.5°	13.0	22.2	20.9	19.5	18.2
80°	10.4	18.2	18.2	15.6	14.3
82.5°	9.1	14.3	14.3	14.3	11.7
85°	7.8	13.0	13.0	11.7	9.1
87.5°	5.2	10.4	11.7	10.4	6.5
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	7.37	8.71	7.74	9.02	9.34	16.48	17.82	16.84	18.13	18.44
	3H	8.42	9.61	8.80	9.94	10.30	16.98	18.17	17.36	18.50	18.86
	4H	8.94	10.04	9.34	10.39	10.78	16.99	18.10	17.40	18.45	18.83
	6H	9.38	10.40	9.80	10.77	11.17	16.99	18.01	17.41	18.38	18.77
	8H	9.57	10.54	10.00	10.93	11.33	16.99	17.95	17.42	18.34	18.75
	12H	9.79	10.71	10.22	11.09	11.52	16.99	17.91	17.42	18.29	18.72
4H	2H	8.47	9.57	8.87	9.92	10.31	16.37	17.47	16.77	17.82	18.21
	3H	9.74	10.65	10.15	11.05	11.45	16.94	17.85	17.36	18.25	18.66
	4H	10.45	11.26	10.88	11.68	12.12	16.99	17.80	17.43	18.22	18.66
	6H	11.08	11.78	11.54	12.22	12.69	17.04	17.74	17.51	18.19	18.65
	8H	11.32	11.97	11.79	12.42	12.89	17.06	17.71	17.53	18.16	18.63
	12H	11.60	12.17	12.08	12.66	13.13	17.09	17.67	17.58	18.15	18.63
8H	4H	10.88	11.53	11.34	11.98	12.45	16.94	17.59	17.41	18.04	18.51
	6H	11.75	12.29	12.25	12.78	13.26	17.03	17.57	17.54	18.06	18.55
	8H	12.15	12.64	12.68	13.15	13.64	17.09	17.58	17.62	18.09	18.58
	12H	12.63	13.06	13.15	13.55	14.12	17.19	17.62	17.71	18.11	18.68
12H	4H	10.92	11.50	11.40	11.98	12.45	16.91	17.49	17.40	17.97	18.45
	6H	11.86	12.34	12.38	12.86	13.35	17.01	17.49	17.53	18.01	18.50
	8H	12.38	12.80	12.89	13.30	13.87	17.12	17.54	17.63	18.04	18.61