

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: P1060652

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060652
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-78)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124RDR-H1020D850-X4F0-XX-UDD-BVL-S
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

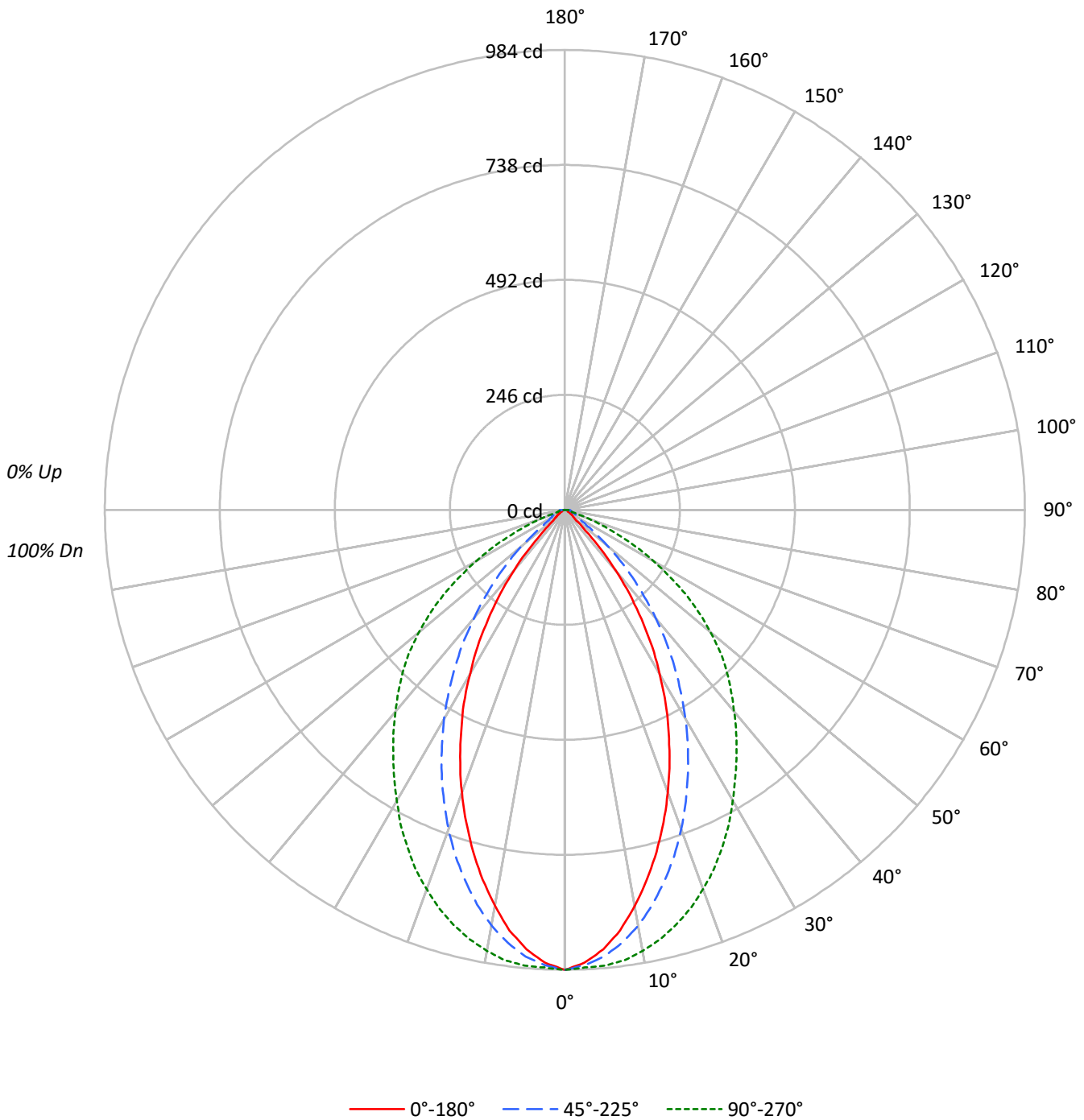
Lumens per Lamp: N/A
Luminaire Lumens: 1235.1 lumens
Efficiency: N/A
Efficacy: 39.6 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.11 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1060652

CATALOG NUMBER: S124RDR-H1020D850-X4F0-XX-UDD-BVL-S

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	112	108	105	103	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	88	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	68	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	80	70	62	57	79	69	62	57	67	61	57	66	60	56	64	59	56	54
7	76	64	57	52	74	64	57	52	62	56	52	61	56	51	60	55	51	50
8	71	60	53	48	70	59	53	48	58	52	48	57	51	47	56	51	47	46
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8475	8475	8475
5°	8157	8293	8462
10°	7522	7898	8378
15°	6751	7333	8193
20°	5901	6666	7919
25°	4991	5920	7567
30°	4031	5133	7141
35°	3001	4289	6728
40°	1905	3399	6330
45°	762	2493	5968
50°	332	1589	5448
55°	254	821	4756
60°	179	561	3772
65°	132	558	2575
70°	131	493	1181
75°	173	519	476
80°	258	580	516
85°	514	1028	771

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5968 cd/sqm

TEST NUMBER: P1060652

CATALOG NUMBER: S124RDR-H1020D850-X4F0-XX-UDD-BVL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.1	7.3
10°-20°	232.4	18.8
20°-30°	293.5	23.8
30°-40°	269.6	21.8
40°-50°	183.8	14.9
50°-60°	99.7	8.1
60°-70°	42.3	3.4
70°-80°	14.6	1.2
80°-90°	9.3	0.7
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°	615.9	49.9
0°-40°	885.5	71.7
0°-60°	1169.0	94.6
0°-90°	1235.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1235.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	984	984	984	984	984	
5°	944	958	959	967	979	87
15°	757	782	822	881	919	211
25°	525	559	623	720	796	240
35°	286	323	408	536	640	177
45°	63	100	205	362	490	58
55°	17	18	55	199	317	15
65°	6	8	27	63	126	7
75°	5	14	16	14	14	6
85°	5	10	10	10	8	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	984.2	984.2	984.2	984.2	984.2
2.5°	969.8	981.5	975.0	977.6	980.2
5°	943.7	958.1	959.4	967.2	978.9
7.5°	907.2	924.2	934.6	954.2	972.4
10°	860.3	881.2	903.3	934.6	958.1
12.5°	810.8	832.9	865.5	909.9	941.1
15°	757.3	782.1	822.5	881.2	919.0
17.5°	701.3	728.7	776.9	846.0	894.2
20°	643.9	673.9	727.4	805.6	864.2
22.5°	585.3	616.6	675.2	763.9	832.9
25°	525.3	559.2	623.1	719.5	796.4
27.5°	468.0	499.2	569.6	675.2	759.9
30°	405.4	440.6	516.2	629.6	718.2
32.5°	348.0	381.9	461.4	582.7	679.1
35°	285.5	323.3	408.0	535.7	640.0
37.5°	226.8	263.3	355.9	491.4	602.2
40°	169.5	207.3	302.4	447.1	563.1
42.5°	113.4	153.8	251.6	401.5	526.6
45°	62.6	100.4	204.7	362.4	490.1
47.5°	32.6	54.7	160.3	323.3	451.0
50°	24.8	30.0	118.6	280.3	406.7
52.5°	20.9	22.2	80.8	237.2	362.4
55°	16.9	18.2	54.7	199.4	316.8
57.5°	13.0	14.3	39.1	162.9	265.9
60°	10.4	11.7	32.6	125.1	219.0
62.5°	7.8	9.1	31.3	92.5	172.1
65°	6.5	7.8	27.4	62.6	126.4
67.5°	5.2	7.8	23.5	40.4	84.7
70°	5.2	10.4	19.6	26.1	46.9
72.5°	5.2	11.7	16.9	16.9	16.9
75°	5.2	14.3	15.6	14.3	14.3
77.5°	5.2	13.0	13.0	13.0	13.0
80°	5.2	11.7	11.7	11.7	10.4
82.5°	5.2	10.4	11.7	11.7	9.1
85°	5.2	10.4	10.4	10.4	7.8
87.5°	3.9	10.4	10.4	10.4	5.2
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	0.00	0.00	0.00	0.00	0.01	15.87	17.14	16.23	17.45	17.77
	3H	0.00	0.49	0.00	0.82	1.19	16.22	17.35	16.60	17.68	18.04
	4H	0.75	1.80	1.15	2.15	2.53	16.19	17.24	16.59	17.59	17.97
	6H	2.11	3.08	2.53	3.45	3.84	16.16	17.12	16.58	17.50	17.89
	8H	2.80	3.71	3.23	4.10	4.50	16.15	17.06	16.58	17.45	17.86
	12H	3.60	4.47	4.03	4.85	5.28	16.15	17.02	16.58	17.40	17.83
4H	2H	1.56	2.61	1.97	2.96	3.35	15.67	16.72	16.07	17.07	17.45
	3H	2.98	3.84	3.40	4.24	4.65	16.06	16.92	16.48	17.32	17.73
	4H	4.43	5.19	4.86	5.61	6.05	16.04	16.81	16.48	17.23	17.67
	6H	5.67	6.33	6.13	6.78	7.24	16.06	16.72	16.53	17.17	17.63
	8H	6.24	6.85	6.71	7.30	7.77	16.07	16.69	16.54	17.13	17.61
	12H	6.91	7.45	7.40	7.94	8.41	16.11	16.65	16.59	17.13	17.61
8H	4H	5.50	6.11	5.97	6.56	7.03	15.94	16.56	16.41	17.01	17.48
	6H	7.11	7.61	7.61	8.11	8.59	15.99	16.49	16.50	16.99	17.47
	8H	7.94	8.39	8.46	8.91	9.40	16.05	16.50	16.57	17.02	17.51
	12H	8.91	9.31	9.42	9.80	10.37	16.17	16.56	16.68	17.06	17.63
12H	4H	5.69	6.23	6.18	6.71	7.19	15.91	16.45	16.39	16.93	17.41
	6H	7.45	7.91	7.98	8.42	8.92	15.96	16.41	16.48	16.93	17.42
	8H	8.47	8.87	8.99	9.37	9.94	16.06	16.46	16.58	16.96	17.53