

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: P1060654

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1060654
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-38)
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-B
Description: DEFINE 4 BLACK 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

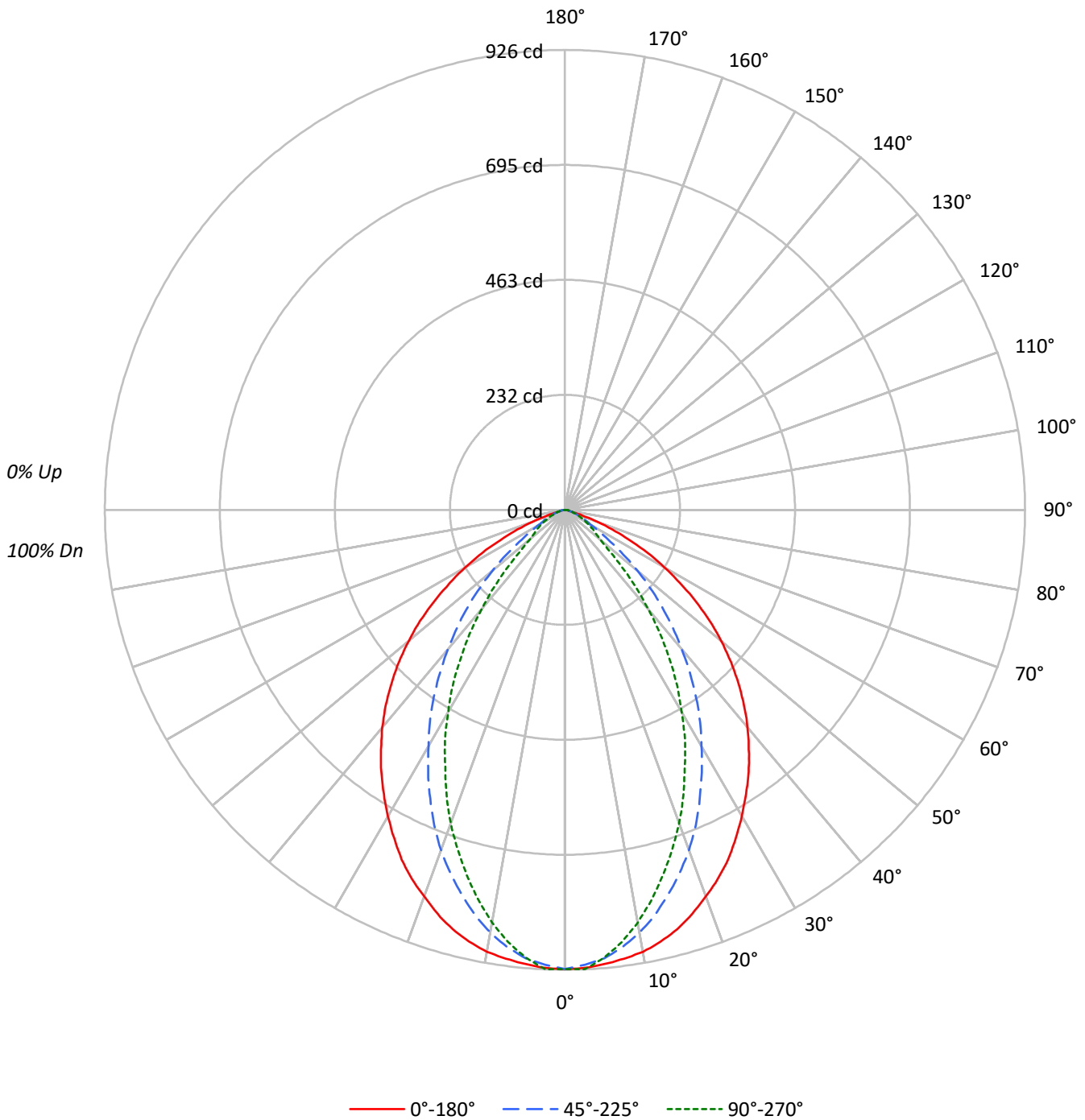
Lumens per Lamp: N/A
Luminaire Lumens: 1363.0 lumens
Efficiency: N/A
Efficacy: 43.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.87 / 1.02
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')
CIE Type: Direct

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: P1060654

CATALOG NUMBER: S124RDR-H1020D850-X4F0-XX-UDD-SVL-B

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	112	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90			90	
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80			80	
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73	71			71	
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63			63	
5	84	74	66	61	82	73	66	60	71	65	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	48	47			47	
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	44	43			43	
9	65	53	46	41	64	53	46	41	52	46	41	51	45	41	50	45	41	39			39	
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36			36	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7961	7961	7961
5°	7935	7833	7822
10°	7901	7560	7377
15°	7789	7151	6790
20°	7589	6682	6157
25°	7385	6099	5419
30°	7082	5464	4673
35°	6775	4831	3860
40°	6425	4113	2927
45°	6010	3361	1967
50°	5495	2547	1220
55°	4828	1681	1036
60°	3992	1032	853
65°	2891	797	691
70°	1574	589	524
75°	346	433	476
80°	258	322	387
85°	257	257	385

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6010 cd/sqm



TEST NUMBER: P1060654

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.6	6.3
10°-20°	227.5	16.7
20°-30°	301.4	22.1
30°-40°	299.1	21.9
40°-50°	230.2	16.9
50°-60°	137.2	10.1
60°-70°	62.4	4.6
70°-80°	16.1	1.2
80°-90°	3.6	0.3
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°	614.5	45.1
0°-40°	913.6	67.0
0°-60°	1280.9	94.0
0°-90°	1363.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1363.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	918	919	906	906	905	87
15°	874	852	802	775	762	246
25°	777	721	642	588	570	357
35°	644	564	460	389	367	402
45°	494	397	276	193	162	380
55°	322	229	112	70	69	287
65°	142	85	39	34	34	143
75°	10	13	13	14	14	22
85°	3	3	3	4	4	3
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	924.5	924.5	924.5	924.5	924.5
2.5°	923.2	924.5	916.7	923.2	925.8
5°	918.0	919.3	906.2	906.2	904.9
7.5°	911.5	908.8	888.0	880.2	877.6
10°	903.6	894.5	864.6	849.0	843.7
12.5°	890.6	876.3	835.9	813.8	804.7
15°	873.7	851.6	802.1	774.7	761.7
17.5°	852.9	825.5	766.9	731.8	717.4
20°	828.1	791.7	729.2	684.9	671.9
22.5°	804.7	759.1	687.5	636.7	622.4
25°	777.3	721.3	641.9	588.5	570.3
27.5°	744.8	684.9	596.3	541.7	523.4
30°	712.2	645.8	549.5	492.2	470.0
32.5°	678.4	605.5	506.5	441.4	420.6
35°	644.5	563.8	459.6	389.3	367.2
37.5°	608.1	522.1	412.8	339.8	315.1
40°	571.6	481.8	365.9	291.7	260.4
42.5°	533.9	440.1	320.3	242.2	210.9
45°	493.5	397.1	276.0	192.7	161.5
47.5°	453.1	356.8	231.8	144.5	115.9
50°	410.2	313.8	190.1	105.5	91.1
52.5°	367.2	272.1	148.4	82.0	78.1
55°	321.6	229.2	112.0	70.3	69.0
57.5°	274.7	190.1	80.7	61.2	58.6
60°	231.8	153.6	59.9	52.1	49.5
62.5°	187.5	115.9	49.5	43.0	40.4
65°	141.9	84.6	39.1	33.9	33.9
67.5°	102.9	57.3	31.2	27.3	26.0
70°	62.5	35.2	23.4	22.1	20.8
72.5°	31.2	20.8	18.2	16.9	16.9
75°	10.4	13.0	13.0	14.3	14.3
77.5°	7.8	9.1	9.1	10.4	10.4
80°	5.2	6.5	6.5	7.8	7.8
82.5°	3.9	3.9	5.2	5.2	6.5
85°	2.6	2.6	2.6	3.9	3.9
87.5°	1.3	1.3	1.3	2.6	2.6
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	16.33	17.66	16.69	17.97	18.29	7.88	9.21	8.24	9.52	9.84
	3H	16.84	18.02	17.22	18.35	18.71	8.69	9.87	9.07	10.20	10.57
	4H	16.80	17.90	17.20	18.25	18.63	8.97	10.07	9.37	10.42	10.80
	6H	16.74	17.74	17.15	18.11	18.51	9.14	10.15	9.56	10.52	10.91
	8H	16.70	17.65	17.13	18.04	18.45	9.21	10.16	9.64	10.55	10.96
	12H	16.66	17.57	17.09	17.95	18.39	9.25	10.16	9.69	10.55	10.98
4H	2H	16.17	17.27	16.57	17.62	18.00	8.32	9.42	8.72	9.77	10.15
	3H	16.72	17.62	17.14	18.02	18.42	9.28	10.17	9.69	10.58	10.98
	4H	16.69	17.49	17.13	17.91	18.35	9.64	10.44	10.08	10.86	11.30
	6H	16.64	17.32	17.10	17.77	18.24	9.89	10.58	10.36	11.02	11.49
	8H	16.59	17.23	17.06	17.68	18.15	9.98	10.62	10.45	11.07	11.54
	12H	16.55	17.12	17.04	17.60	18.08	10.06	10.62	10.54	11.10	11.58
8H	4H	16.58	17.22	17.05	17.67	18.14	9.73	10.37	10.20	10.82	11.29
	6H	16.52	17.04	17.02	17.54	18.02	10.04	10.56	10.54	11.06	11.54
	8H	16.47	16.94	16.99	17.46	17.95	10.17	10.64	10.69	11.16	11.65
	12H	16.44	16.85	16.96	17.35	17.92	10.31	10.72	10.82	11.22	11.79
12H	4H	16.54	17.10	17.02	17.59	18.06	9.70	10.27	10.19	10.75	11.23
	6H	16.46	16.93	16.99	17.45	17.94	10.02	10.49	10.54	11.00	11.50
	8H	16.44	16.85	16.95	17.35	17.92	10.19	10.60	10.71	11.10	11.67