

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: P1059683

Luminaire Tested: S123RDR-H560D850-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059683
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D850-X4F0-XX-UDD-SVL-S
Description: DEFINE 3 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

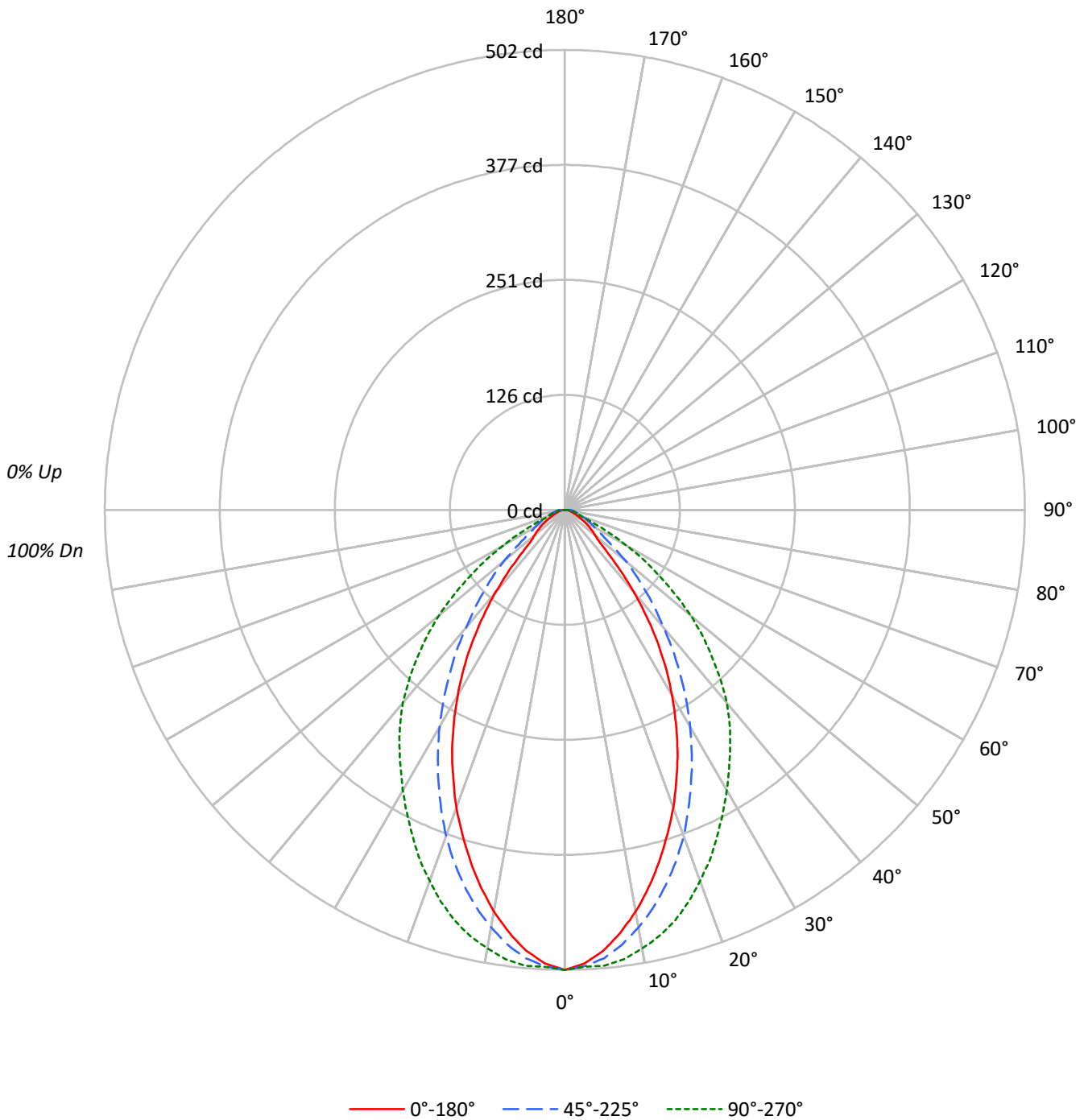
Lumens per Lamp: N/A
Luminaire Lumens: 672.6 lumens
Efficiency: N/A
Efficacy: 38.7 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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	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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				71
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64				64
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58				58
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52				52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				48
8	70	58	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44				44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				40
10	62	51	44	39	61	50	44	39	50	43	39	49	43	39	48	43	39	37				37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5897	5897	5897
5°	5694	5790	5885
10°	5306	5516	5796
15°	4831	5161	5642
20°	4324	4736	5387
25°	3772	4228	5092
30°	3171	3708	4792
35°	2523	3142	4508
40°	1798	2563	4214
45°	1071	2058	3775
50°	791	1567	3268
55°	661	1067	2596
60°	533	878	1825
65°	428	753	978
70°	354	656	604
75°	331	631	567
80°	345	697	548
85°	498	984	687

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3775 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.1	6.9
10°-20°	119.8	17.8
20°-30°	152.9	22.7
30°-40°	143.8	21.4
40°-50°	103.3	15.4
50°-60°	59.2	8.8
60°-70°	27.1	4.0
70°-80°	13.6	2.0
80°-90°	6.6	1.0
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°	318.8	47.4
0°-40°	462.7	68.8
0°-60°	625.2	93.0
0°-90°	672.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	672.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	502	502	502	502	502	
5°	483	493	491	495	499	45
15°	397	411	424	447	464	111
25°	291	304	326	361	393	133
35°	176	188	219	269	314	109
45°	64	78	124	183	227	54
55°	32	33	52	96	127	29
65°	15	21	27	30	35	15
75°	7	15	14	12	12	8
85°	4	7	7	7	5	4
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	502.2	502.2	502.2	502.2	502.2
2.5°	495.6	502.9	498.5	498.5	499.3
5°	483.1	492.7	491.2	494.9	499.3
7.5°	465.5	475.8	478.7	487.5	494.9
10°	445.0	456.8	462.6	476.5	486.1
12.5°	422.3	435.5	445.0	462.6	476.5
15°	397.4	411.3	424.5	447.2	464.1
17.5°	371.7	385.6	402.5	428.9	448.7
20°	346.0	360.0	379.0	406.9	431.1
22.5°	318.2	332.1	352.6	384.2	413.5
25°	291.1	304.3	326.3	361.4	393.0
27.5°	262.5	275.7	299.9	338.0	373.2
30°	233.9	247.1	273.5	314.5	353.4
32.5°	205.3	217.7	246.3	291.8	333.6
35°	176.0	188.4	219.2	269.1	314.5
37.5°	145.9	158.4	194.3	248.5	295.5
40°	117.3	131.2	167.2	228.0	274.9
42.5°	89.4	104.1	145.2	206.0	251.5
45°	64.5	78.4	123.9	182.6	227.3
47.5°	49.1	56.5	104.8	159.1	203.8
50°	43.3	44.0	85.8	137.8	178.9
52.5°	37.4	38.1	66.7	117.3	152.5
55°	32.3	33.0	52.1	96.0	126.8
57.5°	27.1	28.6	42.5	76.2	101.9
60°	22.7	25.7	37.4	57.9	77.7
62.5°	18.3	23.5	32.3	42.5	55.7
65°	15.4	21.3	27.1	30.1	35.2
67.5°	12.5	19.8	22.7	21.3	21.3
70°	10.3	17.6	19.1	17.6	17.6
72.5°	8.8	16.9	16.1	14.7	14.7
75°	7.3	14.7	13.9	12.5	12.5
77.5°	6.6	12.5	11.7	11.0	10.3
80°	5.1	10.3	10.3	9.5	8.1
82.5°	4.4	8.8	8.8	8.1	6.6
85°	3.7	7.3	7.3	6.6	5.1
87.5°	2.9	6.6	6.6	5.9	3.7
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	6.15	7.47	6.52	7.78	8.10	13.37	14.69	13.73	15.00	15.31
	3H	7.55	8.72	7.93	9.05	9.42	13.61	14.78	13.99	15.11	15.47
	4H	8.11	9.20	8.52	9.55	9.94	13.71	14.80	14.12	15.16	15.54
	6H	8.57	9.58	8.99	9.95	10.34	13.82	14.82	14.24	15.19	15.59
	8H	8.76	9.71	9.19	10.10	10.50	13.87	14.82	14.30	15.21	15.62
	12H	8.95	9.86	9.38	10.24	10.67	13.92	14.83	14.35	15.21	15.64
4H	2H	7.22	8.31	7.62	8.66	9.05	13.33	14.42	13.73	14.77	15.15
	3H	8.92	9.81	9.33	10.21	10.62	13.70	14.59	14.11	15.00	15.40
	4H	9.75	10.55	10.19	10.97	11.41	13.89	14.68	14.32	15.10	15.55
	6H	10.41	11.10	10.87	11.55	12.01	14.11	14.80	14.57	15.25	15.71
	8H	10.66	11.31	11.13	11.76	12.23	14.21	14.86	14.68	15.30	15.77
	12H	10.92	11.49	11.41	11.98	12.45	14.33	14.90	14.81	15.38	15.85
8H	4H	10.18	10.83	10.65	11.28	11.75	13.93	14.58	14.40	15.02	15.49
	6H	11.14	11.67	11.64	12.17	12.65	14.26	14.79	14.77	15.29	15.77
	8H	11.60	12.08	12.12	12.60	13.09	14.45	14.93	14.98	15.45	15.94
	12H	12.08	12.50	12.60	13.00	13.57	14.69	15.11	15.20	15.60	16.17
12H	4H	10.24	10.82	10.73	11.30	11.77	13.92	14.49	14.41	14.98	15.45
	6H	11.29	11.76	11.81	12.28	12.77	14.29	14.77	14.81	15.28	15.77
	8H	11.88	12.30	12.39	12.80	13.37	14.55	14.97	15.07	15.47	16.04