

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: P1059680

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059680
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D850-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 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

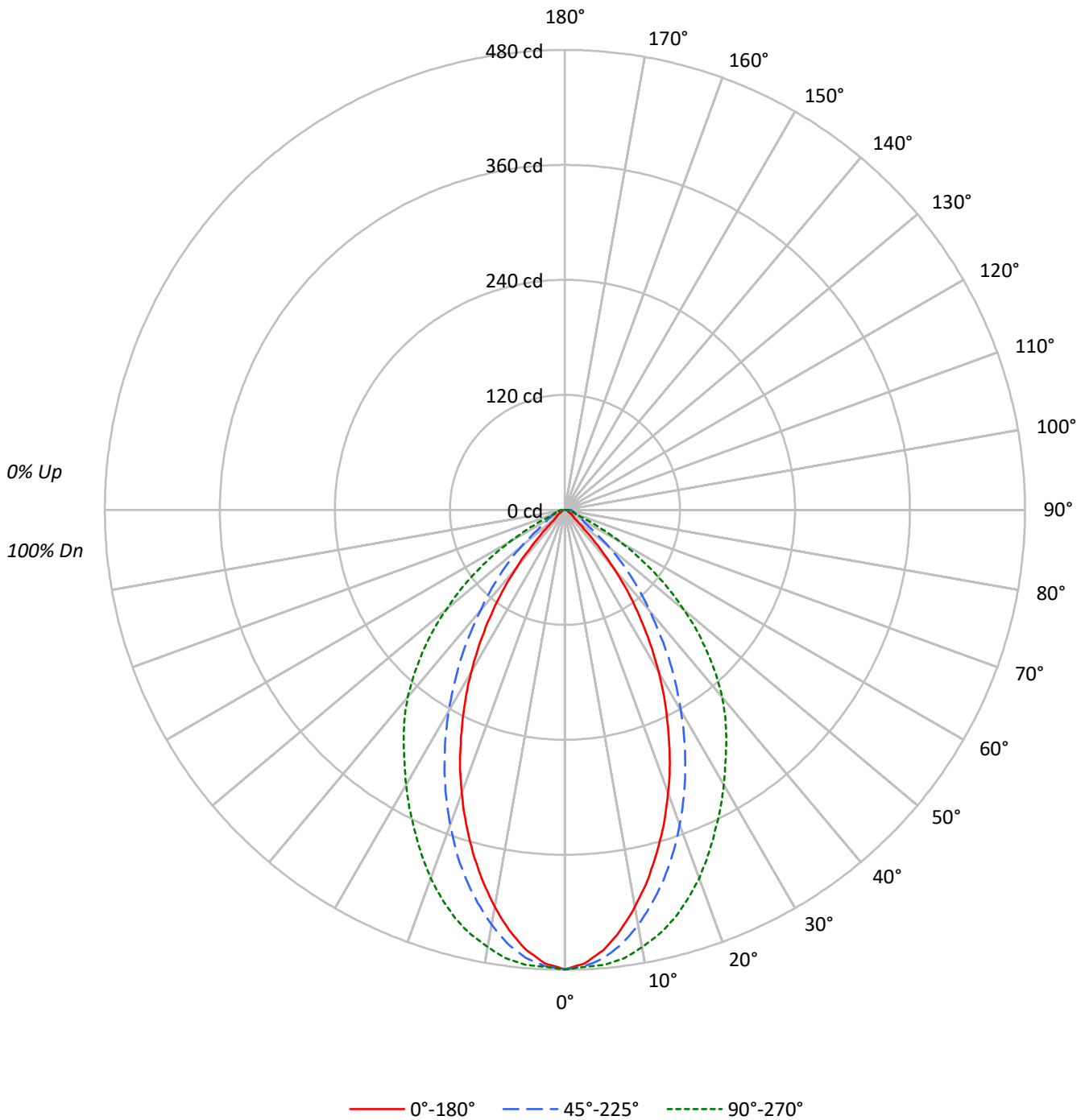
Lumens per Lamp: N/A
Luminaire Lumens: 576.1 lumens
Efficiency: N/A
Efficacy: 33.1 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5632	5632	5632
5°	5436	5532	5618
10°	5019	5246	5525
15°	4502	4849	5366
20°	3931	4371	5113
25°	3306	3848	4798
30°	2655	3281	4493
35°	1945	2702	4204
40°	1203	2102	3912
45°	463	1583	3482
50°	228	1085	2947
55°	180	600	2311
60°	120	500	1550
65°	103	447	692
70°	100	402	402
75°	132	431	399
80°	196	548	446
85°	296	889	593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3482 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	7.6
10°-20°	112.6	19.5
20°-30°	139.7	24.3
30°-40°	125.2	21.7
40°-50°	82.3	14.3
50°-60°	41.2	7.2
60°-70°	16.3	2.8
70°-80°	9.1	1.6
80°-90°	5.7	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°	296.3	51.4
0°-40°	421.4	73.2
0°-60°	544.9	94.6
0°-90°	576.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	576.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	480	480	480	480	480	
5°	461	469	469	472	477	43
15°	370	382	399	426	441	103
25°	255	271	297	339	370	117
35°	136	154	188	246	293	84
45°	28	46	95	161	210	26
55°	9	10	29	79	113	8
65°	4	10	16	20	25	4
75°	3	10	10	9	9	3
85°	2	7	7	7	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	479.6	479.6	479.6	479.6	479.6
2.5°	473.7	480.3	476.6	476.6	477.4
5°	461.2	468.6	469.3	472.2	476.6
7.5°	442.9	452.4	456.8	465.6	472.2
10°	420.9	431.2	440.0	455.4	463.4
12.5°	396.7	407.0	420.2	441.4	453.9
15°	370.3	382.0	398.9	426.0	441.4
17.5°	343.2	354.9	375.4	406.2	426.0
20°	314.6	327.8	349.8	385.0	409.2
22.5°	286.0	300.7	324.1	362.2	390.1
25°	255.2	271.3	297.0	338.8	370.3
27.5°	225.9	242.7	269.9	315.3	351.2
30°	195.8	212.7	242.0	291.1	331.4
32.5°	165.0	184.1	214.9	268.4	311.7
35°	135.7	154.0	188.5	246.4	293.3
37.5°	107.1	125.4	161.3	225.1	275.0
40°	78.5	97.5	137.1	204.6	255.2
42.5°	51.3	71.1	115.9	184.1	233.2
45°	27.9	46.2	95.3	160.6	209.7
47.5°	15.4	24.9	77.0	138.6	187.0
50°	12.5	13.9	59.4	118.1	161.3
52.5°	10.3	11.7	42.5	98.3	137.9
55°	8.8	10.3	29.3	79.2	112.9
57.5°	7.3	8.8	23.5	60.9	88.7
60°	5.1	8.8	21.3	44.7	66.0
62.5°	4.4	8.8	18.3	30.8	44.0
65°	3.7	10.3	16.1	20.5	24.9
67.5°	2.9	10.3	13.9	13.2	13.2
70°	2.9	10.3	11.7	11.0	11.7
72.5°	2.9	11.0	11.0	10.3	10.3
75°	2.9	9.5	9.5	8.8	8.8
77.5°	2.9	8.8	8.8	8.1	8.1
80°	2.9	8.1	8.1	7.3	6.6
82.5°	2.9	7.3	7.3	6.6	5.9
85°	2.2	6.6	6.6	6.6	4.4
87.5°	2.2	5.9	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	0.00	0.00	0.00	0.03	0.34	12.55	13.81	12.92	14.12	14.44
	3H	0.99	2.10	1.37	2.43	2.79	12.63	13.74	13.01	14.08	14.44
	4H	2.14	3.18	2.54	3.53	3.91	12.70	13.73	13.10	14.08	14.47
	6H	3.19	4.14	3.60	4.51	4.90	12.79	13.75	13.21	14.12	14.51
	8H	3.72	4.62	4.15	5.01	5.42	12.86	13.75	13.29	14.15	14.55
	12H	4.20	5.06	4.63	5.44	5.87	12.93	13.79	13.36	14.17	14.60
4H	2H	1.71	2.75	2.12	3.10	3.48	12.41	13.45	12.82	13.80	14.18
	3H	4.18	5.03	4.60	5.43	5.84	12.59	13.43	13.00	13.84	14.24
	4H	5.52	6.28	5.96	6.70	7.14	12.71	13.47	13.15	13.89	14.34
	6H	6.65	7.31	7.12	7.75	8.22	12.93	13.58	13.40	14.03	14.50
	8H	7.16	7.77	7.63	8.22	8.69	13.06	13.67	13.53	14.12	14.59
	12H	7.61	8.15	8.10	8.64	9.11	13.22	13.76	13.70	14.24	14.72
8H	4H	6.44	7.05	6.91	7.50	7.97	12.72	13.33	13.19	13.78	14.25
	6H	8.04	8.54	8.55	9.04	9.52	13.05	13.55	13.55	14.05	14.53
	8H	8.86	9.32	9.39	9.83	10.32	13.28	13.73	13.80	14.24	14.74
	12H	9.64	10.04	10.16	10.54	11.11	13.60	14.00	14.12	14.50	15.07
12H	4H	6.61	7.15	7.09	7.63	8.11	12.71	13.25	13.19	13.73	14.21
	6H	8.36	8.81	8.88	9.33	9.82	13.08	13.53	13.60	14.05	14.54
	8H	9.36	9.76	9.88	10.26	10.83	13.39	13.79	13.90	14.28	14.86