

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: P1059707

Luminaire Tested: S123RDR-H560D935-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059707
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-H560D935-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: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

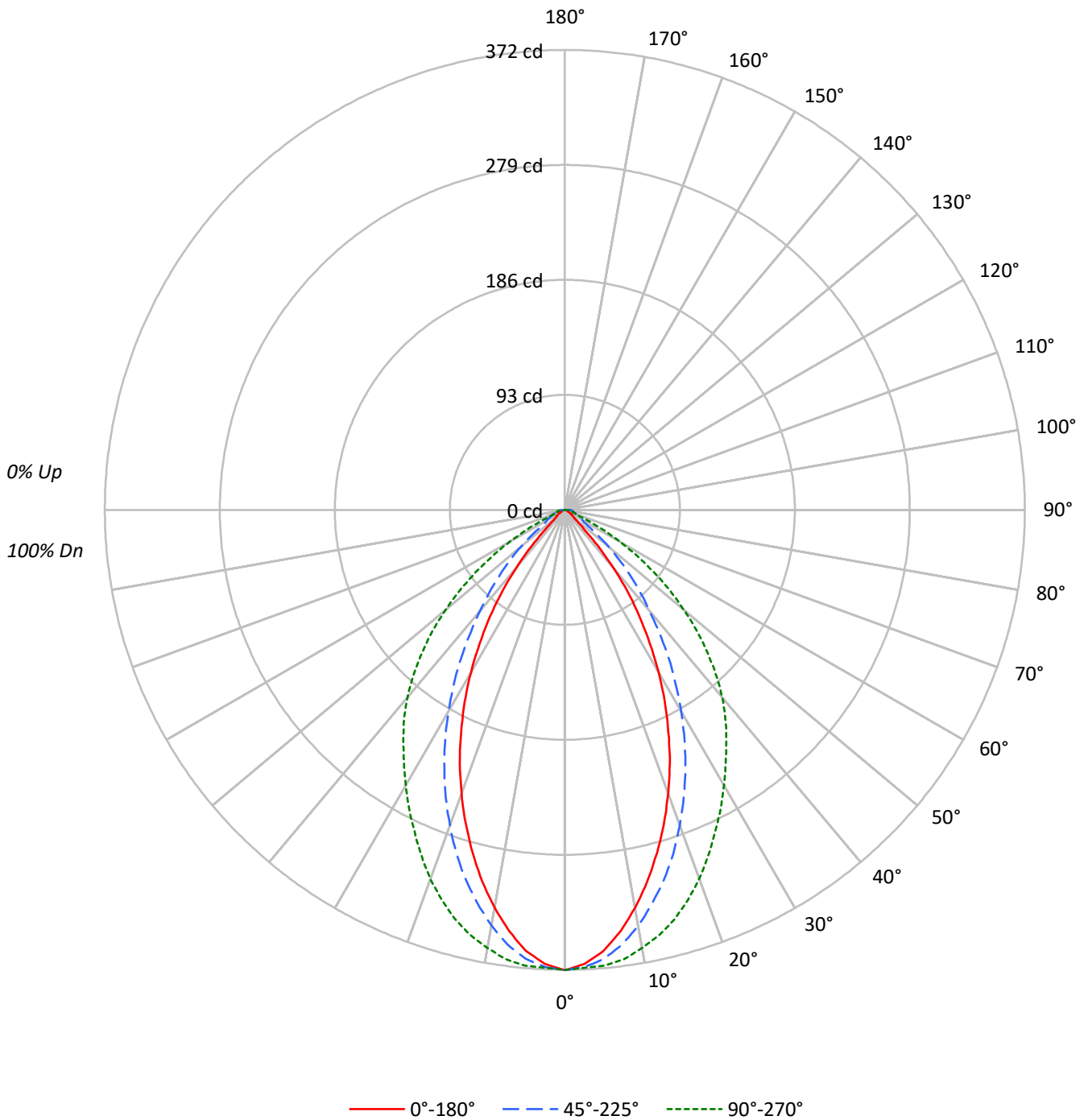
Lumens per Lamp: N/A
Luminaire Lumens: 447.2 lumens
Efficiency: N/A
Efficacy: 25.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	4372	4372	4372
5°	4221	4295	4362
10°	3897	4073	4290
15°	3495	3765	4166
20°	3052	3394	3970
25°	2567	2988	3725
30°	2061	2548	3489
35°	1509	2097	3264
40°	934	1633	3037
45°	359	1229	2704
50°	177	842	2287
55°	139	467	1795
60°	94	388	1202
65°	78	347	539
70°	79	312	312
75°	104	336	309
80°	156	426	345
85°	229	687	458

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2704 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.1	7.6
10°-20°	87.4	19.5
20°-30°	108.5	24.3
30°-40°	97.2	21.7
40°-50°	63.9	14.3
50°-60°	32.0	7.2
60°-70°	12.6	2.8
70°-80°	7.1	1.6
80°-90°	4.5	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°	230.0	51.4
0°-40°	327.2	73.2
0°-60°	423.1	94.6
0°-90°	447.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	447.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	372	372	372	372	372	
5°	358	364	364	367	370	33
15°	288	297	310	331	343	80
25°	198	211	231	263	288	91
35°	105	120	146	191	228	65
45°	22	36	74	125	163	21
55°	7	8	23	62	88	6
65°	3	8	12	16	19	3
75°	2	7	7	7	7	2
85°	2	5	5	5	3	2
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	372.3	372.3	372.3	372.3	372.3
2.5°	367.8	372.9	370.1	370.1	370.6
5°	358.1	363.8	364.4	366.6	370.1
7.5°	343.9	351.3	354.7	361.5	366.6
10°	326.8	334.8	341.6	353.5	359.8
12.5°	308.0	316.0	326.2	342.7	352.4
15°	287.5	296.6	309.7	330.8	342.7
17.5°	266.4	275.5	291.5	315.4	330.8
20°	244.2	254.5	271.6	298.9	317.7
22.5°	222.0	233.4	251.6	281.2	302.9
25°	198.1	210.6	230.6	263.0	287.5
27.5°	175.3	188.4	209.5	244.8	272.7
30°	152.0	165.1	187.9	226.0	257.3
32.5°	128.1	142.9	166.8	208.4	242.0
35°	105.3	119.6	146.3	191.3	227.7
37.5°	83.1	97.4	125.2	174.8	213.5
40°	60.9	75.7	106.5	158.8	198.1
42.5°	39.9	55.2	90.0	142.9	181.0
45°	21.6	35.9	74.0	124.7	162.8
47.5°	12.0	19.4	59.8	107.6	145.2
50°	9.7	10.8	46.1	91.7	125.2
52.5°	8.0	9.1	33.0	76.3	107.0
55°	6.8	8.0	22.8	61.5	87.7
57.5°	5.7	6.8	18.2	47.3	68.9
60°	4.0	6.8	16.5	34.7	51.2
62.5°	3.4	6.8	14.2	23.9	34.2
65°	2.8	8.0	12.5	15.9	19.4
67.5°	2.3	8.0	10.8	10.2	10.2
70°	2.3	8.0	9.1	8.5	9.1
72.5°	2.3	8.5	8.5	8.0	8.0
75°	2.3	7.4	7.4	6.8	6.8
77.5°	2.3	6.8	6.8	6.3	6.3
80°	2.3	6.3	6.3	5.7	5.1
82.5°	2.3	5.7	5.7	5.1	4.6
85°	1.7	5.1	5.1	5.1	3.4
87.5°	1.7	4.6	5.1	4.6	2.8
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	0.00	11.68	12.93	12.04	13.25	13.56
	3H	0.11	1.23	0.50	1.56	1.92	11.75	12.87	12.13	13.20	13.56
	4H	1.28	2.32	1.69	2.67	3.06	11.82	12.85	12.22	13.20	13.59
	6H	2.34	3.29	2.76	3.66	4.06	11.92	12.87	12.33	13.24	13.63
	8H	2.89	3.79	3.32	4.18	4.58	11.98	12.88	12.41	13.27	13.67
	12H	3.36	4.22	3.80	4.61	5.04	12.05	12.91	12.48	13.29	13.72
4H	2H	0.83	1.86	1.23	2.21	2.60	11.54	12.57	11.94	12.92	13.31
	3H	3.30	4.15	3.72	4.55	4.96	11.71	12.55	12.12	12.96	13.36
	4H	4.65	5.41	5.09	5.83	6.27	11.83	12.59	12.27	13.01	13.46
	6H	5.79	6.44	6.25	6.89	7.36	12.05	12.71	12.52	13.15	13.62
	8H	6.30	6.91	6.77	7.36	7.83	12.18	12.79	12.65	13.24	13.71
	12H	6.76	7.30	7.25	7.78	8.26	12.34	12.88	12.82	13.36	13.83
8H	4H	5.56	6.17	6.03	6.62	7.09	11.84	12.45	12.31	12.90	13.37
	6H	7.17	7.67	7.68	8.17	8.65	12.17	12.67	12.67	13.17	13.65
	8H	8.00	8.45	8.53	8.97	9.46	12.40	12.85	12.92	13.36	13.86
	12H	8.78	9.18	9.29	9.67	10.25	12.72	13.12	13.24	13.62	14.19
12H	4H	5.73	6.27	6.22	6.76	7.23	11.83	12.37	12.31	12.85	13.32
	6H	7.49	7.94	8.01	8.46	8.95	12.20	12.65	12.72	13.17	13.66
	8H	8.50	8.90	9.02	9.40	9.97	12.51	12.91	13.03	13.40	13.98