

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: P1059662

Luminaire Tested: S123RDR-H560D835-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059662
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-H560D835-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, 80 CRI LEDS
Ballast/Driver: -

Summary

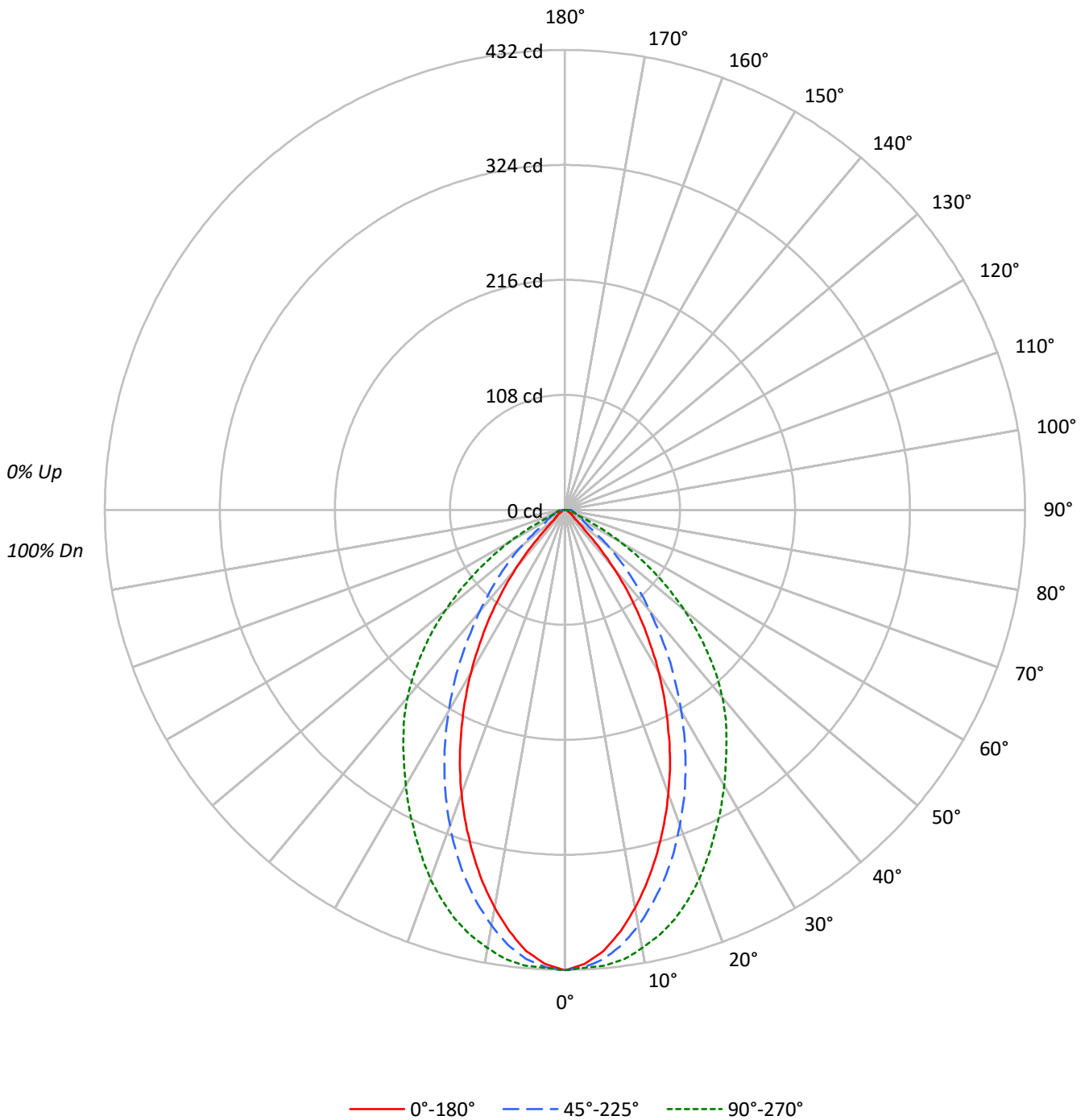
Lumens per Lamp: N/A
Luminaire Lumens: 519.5 lumens
Efficiency: N/A
Efficacy: 29.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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°	5077	5077	5077
5°	4902	4988	5066
10°	4525	4730	4983
15°	4059	4373	4840
20°	3545	3941	4611
25°	2981	3470	4326
30°	2393	2959	4053
35°	1753	2435	3792
40°	1085	1895	3527
45°	417	1428	3140
50°	205	979	2658
55°	162	540	2084
60°	108	451	1397
65°	92	403	625
70°	89	364	364
75°	118	390	358
80°	176	494	406
85°	269	808	539

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3140 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.6	7.6
10°-20°	101.5	19.5
20°-30°	126.0	24.3
30°-40°	112.9	21.7
40°-50°	74.2	14.3
50°-60°	37.2	7.2
60°-70°	14.7	2.8
70°-80°	8.2	1.6
80°-90°	5.2	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°	267.1	51.4
0°-40°	380.0	73.2
0°-60°	491.4	94.6
0°-90°	519.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	519.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	416	422	423	426	430	39
15°	334	344	360	384	398	93
25°	230	245	268	306	334	105
35°	122	139	170	222	264	76
45°	25	42	86	145	189	24
55°	8	9	26	71	102	7
65°	3	9	14	18	22	3
75°	3	9	9	8	8	3
85°	2	6	6	6	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	432.4	432.4	432.4	432.4	432.4
2.5°	427.1	433.1	429.8	429.8	430.5
5°	415.9	422.5	423.2	425.8	429.8
7.5°	399.4	408.0	411.9	419.9	425.8
10°	379.5	388.8	396.7	410.6	417.9
12.5°	357.7	367.0	378.9	398.1	409.3
15°	333.9	344.5	359.7	384.2	398.1
17.5°	309.5	320.0	338.5	366.3	384.2
20°	283.7	295.6	315.4	347.1	369.0
22.5°	257.9	271.1	292.3	326.6	351.8
25°	230.1	244.7	267.8	305.5	333.9
27.5°	203.7	218.9	243.3	284.3	316.7
30°	176.5	191.8	218.2	262.5	298.9
32.5°	148.8	166.0	193.7	242.0	281.0
35°	122.3	138.9	169.9	222.2	264.5
37.5°	96.5	113.1	145.5	203.0	248.0
40°	70.8	87.9	123.6	184.5	230.1
42.5°	46.3	64.1	104.5	166.0	210.3
45°	25.1	41.7	86.0	144.8	189.1
47.5°	13.9	22.5	69.4	125.0	168.6
50°	11.2	12.6	53.6	106.5	145.5
52.5°	9.3	10.6	38.4	88.6	124.3
55°	7.9	9.3	26.4	71.4	101.8
57.5°	6.6	7.9	21.2	54.9	80.0
60°	4.6	7.9	19.2	40.3	59.5
62.5°	4.0	7.9	16.5	27.8	39.7
65°	3.3	9.3	14.5	18.5	22.5
67.5°	2.6	9.3	12.6	11.9	11.9
70°	2.6	9.3	10.6	9.9	10.6
72.5°	2.6	9.9	9.9	9.3	9.3
75°	2.6	8.6	8.6	7.9	7.9
77.5°	2.6	7.9	7.9	7.3	7.3
80°	2.6	7.3	7.3	6.6	6.0
82.5°	2.6	6.6	6.6	6.0	5.3
85°	2.0	6.0	6.0	6.0	4.0
87.5°	2.0	5.3	6.0	5.3	3.3
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	12.19	13.45	12.56	13.76	14.08
	3H	0.61	1.73	0.99	2.06	2.42	12.27	13.38	12.65	13.71	14.08
	4H	1.77	2.81	2.18	3.16	3.54	12.33	13.37	12.74	13.72	14.11
	6H	2.81	3.76	3.23	4.13	4.53	12.43	13.38	12.85	13.76	14.15
	8H	3.34	4.24	3.78	4.64	5.04	12.50	13.39	12.93	13.79	14.19
	12H	3.83	4.69	4.26	5.07	5.50	12.57	13.43	13.00	13.81	14.24
4H	2H	1.34	2.38	1.74	2.73	3.11	12.05	13.09	12.46	13.44	13.82
	3H	3.82	4.66	4.23	5.07	5.47	12.23	13.07	12.64	13.48	13.88
	4H	5.16	5.92	5.60	6.34	6.78	12.35	13.11	12.79	13.53	13.97
	6H	6.29	6.94	6.75	7.39	7.86	12.57	13.22	13.04	13.67	14.14
	8H	6.79	7.40	7.26	7.85	8.32	12.70	13.31	13.17	13.76	14.23
	12H	7.25	7.79	7.74	8.28	8.75	12.86	13.40	13.35	13.88	14.36
8H	4H	6.08	6.69	6.55	7.14	7.61	12.36	12.97	12.83	13.41	13.89
	6H	7.68	8.18	8.18	8.68	9.16	12.69	13.19	13.19	13.69	14.17
	8H	8.50	8.95	9.03	9.47	9.96	12.92	13.37	13.44	13.89	14.38
	12H	9.29	9.69	9.81	10.18	10.76	13.25	13.65	13.77	14.14	14.72
12H	4H	6.25	6.79	6.73	7.27	7.75	12.35	12.88	12.83	13.37	13.84
	6H	8.00	8.45	8.52	8.96	9.46	12.72	13.17	13.24	13.69	14.18
	8H	9.00	9.40	9.52	9.90	10.47	13.03	13.43	13.55	13.93	14.50