

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: P1059664

Luminaire Tested: S123RDR-H560D835-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059664  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H560D835-X4F0-XX-UDD-SVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

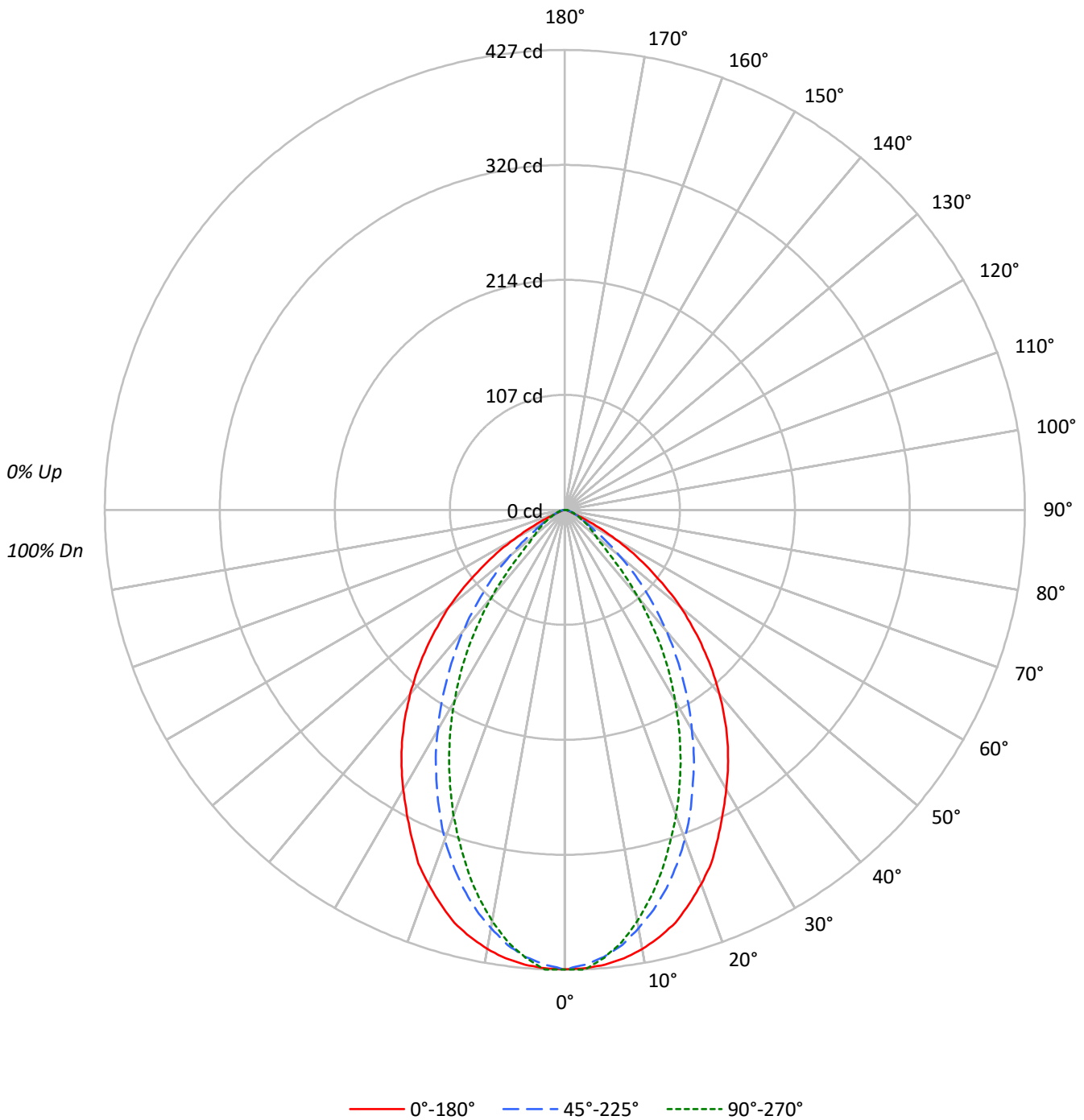
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 550.7 lumens  
Efficiency: N/A  
Efficacy: 31.7 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 0.85 / 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	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73				73
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39				39

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5009	5009	5009
5°	4998	4912	4920
10°	4938	4701	4622
15°	4825	4424	4223
20°	4621	4069	3771
25°	4355	3645	3294
30°	4065	3197	2776
35°	3777	2726	2235
40°	3421	2247	1620
45°	3016	1744	976
50°	2558	1218	663
55°	1947	731	555
60°	1273	465	434
65°	533	347	347
70°	182	251	271
75°	150	181	209
80°	88	135	176
85°	94	94	175

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3016 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.4	7.2
10°-20°	103.1	18.7
20°-30°	132.2	24.0
30°-40°	124.1	22.5
40°-50°	86.6	15.7
50°-60°	44.8	8.1
60°-70°	15.3	2.8
70°-80°	4.4	0.8
80°-90°	0.9	0.2
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°	274.7	49.9
0°-40°	398.8	72.4
0°-60°	530.2	96.3
0°-90°	550.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	550.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	427	427	427	427	427	
5°	424	423	417	419	417	40
15°	397	387	364	352	347	111
25°	336	315	281	262	254	155
35°	264	231	190	166	156	164
45°	182	149	105	73	59	140
55°	95	71	36	28	27	86
65°	19	16	12	12	12	23
75°	3	3	4	5	5	3
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	426.6	426.6	426.6	426.6	426.6
2.5°	426.0	426.6	422.6	426.6	427.3
5°	424.0	423.3	416.7	418.7	417.4
7.5°	420.0	418.0	407.5	404.8	404.8
10°	414.1	410.1	394.3	389.6	387.6
12.5°	406.1	400.9	380.4	371.8	368.5
15°	396.9	387.0	363.9	352.0	347.4
17.5°	383.7	370.5	345.4	331.5	324.3
20°	369.8	353.3	325.6	309.1	301.8
22.5°	355.3	335.5	303.8	285.9	278.0
25°	336.1	315.0	281.3	262.2	254.2
27.5°	317.6	295.2	259.5	237.7	229.8
30°	299.8	273.4	235.8	214.6	204.7
32.5°	282.0	252.3	213.3	190.2	180.9
35°	263.5	231.1	190.2	165.8	155.9
37.5°	243.7	210.7	168.4	142.0	130.1
40°	223.2	188.9	146.6	116.9	105.7
42.5°	202.7	169.1	124.8	94.4	81.2
45°	181.6	148.6	105.0	72.6	58.8
47.5°	160.5	128.1	85.9	52.8	44.2
50°	140.0	109.0	66.7	39.0	36.3
52.5°	117.5	90.5	50.2	32.4	31.7
55°	95.1	71.3	35.7	27.7	27.1
57.5°	75.3	55.5	25.8	23.1	22.5
60°	54.2	39.6	19.8	19.2	18.5
62.5°	35.7	27.1	15.8	15.2	15.2
65°	19.2	16.5	12.5	11.9	12.5
67.5°	7.9	9.2	9.2	9.9	9.9
70°	5.3	5.9	7.3	7.9	7.9
72.5°	4.0	4.6	5.3	5.9	5.9
75°	3.3	3.3	4.0	4.6	4.6
77.5°	2.0	2.6	2.6	3.3	4.0
80°	1.3	2.0	2.0	2.6	2.6
82.5°	0.7	1.3	1.3	2.0	2.0
85°	0.7	0.7	0.7	0.7	1.3
87.5°	0.0	0.0	0.0	0.0	0.7
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	11.93	13.19	12.30	13.51	13.82	5.44	6.70	5.80	7.01	7.32
	3H	11.89	12.99	12.27	13.33	13.69	6.21	7.32	6.59	7.65	8.01
	4H	11.83	12.86	12.24	13.21	13.60	6.41	7.44	6.81	7.79	8.17
	6H	11.76	12.71	12.18	13.08	13.47	6.55	7.50	6.97	7.87	8.26
	8H	11.72	12.61	12.15	13.00	13.41	6.59	7.48	7.02	7.87	8.28
	12H	11.68	12.53	12.11	12.91	13.34	6.61	7.46	7.04	7.84	8.27
4H	2H	11.78	12.81	12.18	13.16	13.55	5.69	6.72	6.09	7.07	7.46
	3H	11.76	12.60	12.18	13.00	13.41	6.60	7.43	7.01	7.84	8.24
	4H	11.71	12.45	12.15	12.87	13.32	6.87	7.61	7.30	8.03	8.47
	6H	11.65	12.29	12.12	12.74	13.21	7.08	7.72	7.55	8.17	8.63
	8H	11.60	12.20	12.07	12.65	13.12	7.14	7.74	7.61	8.19	8.66
	12H	11.56	12.08	12.05	12.57	13.04	7.18	7.70	7.67	8.19	8.66
8H	4H	11.60	12.19	12.07	12.64	13.11	6.85	7.44	7.32	7.89	8.36
	6H	11.54	12.02	12.04	12.52	13.00	7.12	7.60	7.62	8.10	8.58
	8H	11.48	11.92	12.01	12.44	12.93	7.22	7.66	7.75	8.18	8.67
	12H	11.45	11.83	11.97	12.33	12.90	7.30	7.69	7.82	8.18	8.75
12H	4H	11.55	12.08	12.04	12.56	13.04	6.81	7.33	7.30	7.82	8.29
	6H	11.48	11.91	12.00	12.43	12.92	7.08	7.51	7.60	8.03	8.52
	8H	11.45	11.83	11.96	12.33	12.90	7.22	7.60	7.73	8.10	8.67