

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: P1059691

Luminaire Tested: S123RDR-H560D927-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059691  
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-H560D927-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: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

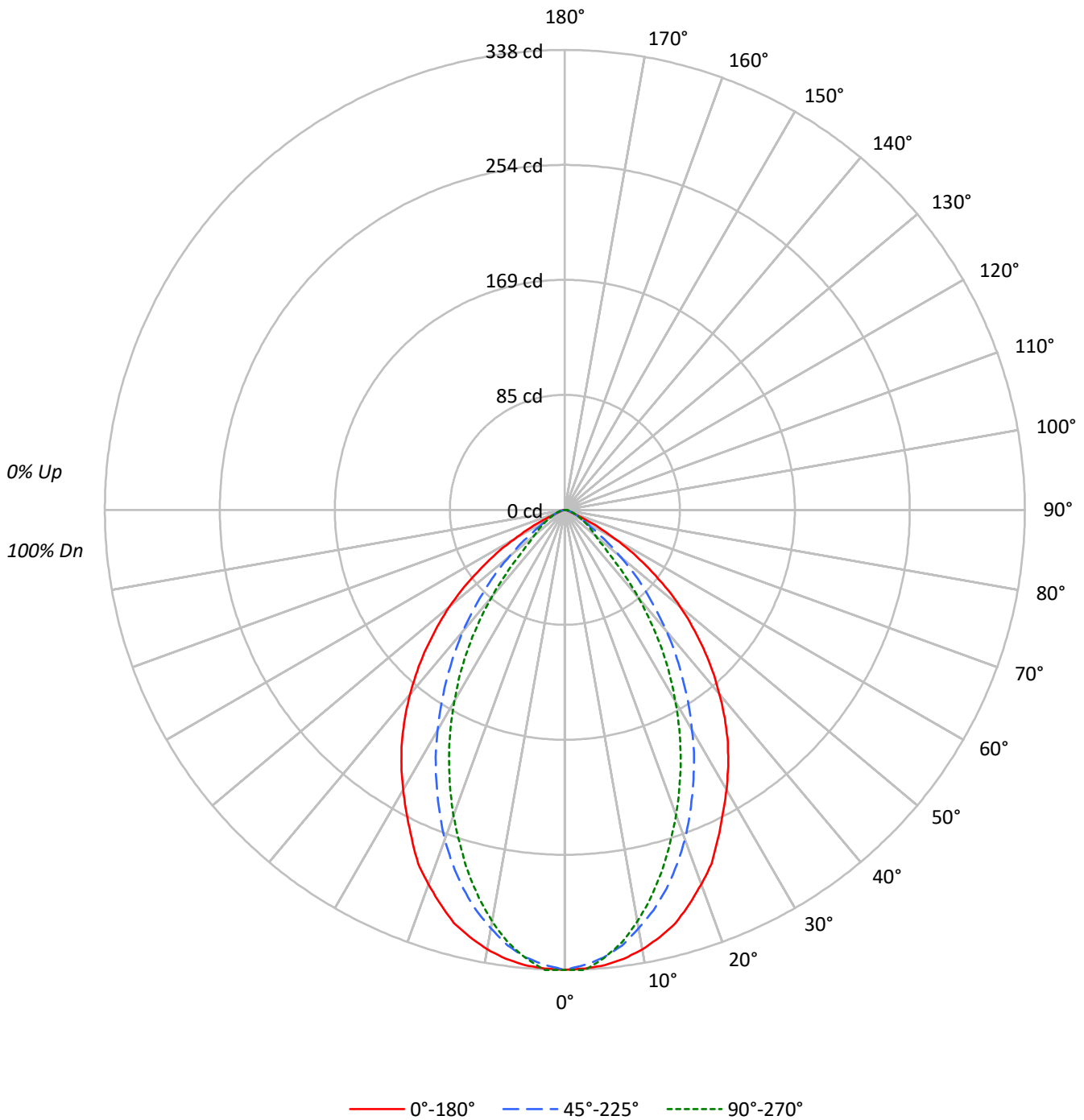
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 436.3 lumens  
Efficiency: N/A  
Efficacy: 25.1 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	71	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	49	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°	3969	3969	3969
5°	3959	3891	3897
10°	3911	3724	3662
15°	3822	3505	3346
20°	3661	3223	2988
25°	3450	2888	2609
30°	3220	2533	2199
35°	2992	2160	1770
40°	2710	1780	1283
45°	2390	1382	774
50°	2026	965	526
55°	1542	577	438
60°	1008	369	343
65°	422	275	275
70°	144	199	216
75°	118	141	168
80°	68	108	142
85°	67	67	135

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2390 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.2	7.2
10°-20°	81.7	18.7
20°-30°	104.7	24.0
30°-40°	98.3	22.5
40°-50°	68.6	15.7
50°-60°	35.5	8.1
60°-70°	12.1	2.8
70°-80°	3.5	0.8
80°-90°	0.7	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°	217.6	49.9
0°-40°	315.9	72.4
0°-60°	420.0	96.3
0°-90°	436.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	436.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	338	338	338	338	338	
5°	336	335	330	332	331	32
15°	314	307	288	279	275	88
25°	266	250	223	208	201	122
35°	209	183	151	131	124	130
45°	144	118	83	58	47	111
55°	75	56	28	22	21	68
65°	15	13	10	9	10	18
75°	3	3	3	4	4	3
85°	0	0	0	0	1	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	338.0	338.0	338.0	338.0	338.0
2.5°	337.4	338.0	334.8	338.0	338.5
5°	335.9	335.3	330.1	331.7	330.6
7.5°	332.7	331.2	322.8	320.7	320.7
10°	328.0	324.9	312.3	308.7	307.1
12.5°	321.7	317.6	301.3	294.5	291.9
15°	314.4	306.6	288.3	278.8	275.2
17.5°	303.9	293.5	273.6	262.6	256.9
20°	293.0	279.9	257.9	244.8	239.1
22.5°	281.5	265.8	240.6	226.5	220.2
25°	266.3	249.5	222.9	207.7	201.4
27.5°	251.6	233.8	205.6	188.3	182.1
30°	237.5	216.6	186.8	170.0	162.2
32.5°	223.4	199.8	169.0	150.7	143.3
35°	208.7	183.1	150.7	131.3	123.5
37.5°	193.0	166.9	133.4	112.5	103.1
40°	176.8	149.6	116.1	92.6	83.7
42.5°	160.6	133.9	98.9	74.8	64.3
45°	143.9	117.7	83.2	57.5	46.6
47.5°	127.1	101.5	68.0	41.9	35.1
50°	110.9	86.3	52.8	30.9	28.8
52.5°	93.1	71.7	39.8	25.6	25.1
55°	75.3	56.5	28.2	22.0	21.4
57.5°	59.6	43.9	20.4	18.3	17.8
60°	42.9	31.4	15.7	15.2	14.6
62.5°	28.2	21.4	12.6	12.0	12.0
65°	15.2	13.1	9.9	9.4	9.9
67.5°	6.3	7.3	7.3	7.8	7.8
70°	4.2	4.7	5.8	6.3	6.3
72.5°	3.1	3.7	4.2	4.7	4.7
75°	2.6	2.6	3.1	3.7	3.7
77.5°	1.6	2.1	2.1	2.6	3.1
80°	1.0	1.6	1.6	2.1	2.1
82.5°	0.5	1.0	1.0	1.6	1.6
85°	0.5	0.5	0.5	0.5	1.0
87.5°	0.0	0.0	0.0	0.0	0.5
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	11.12	12.38	11.48	12.69	13.00	4.63	5.89	4.99	6.20	6.51
	3H	11.07	12.18	11.45	12.51	12.87	5.40	6.51	5.78	6.84	7.20
	4H	11.02	12.05	11.42	12.40	12.78	5.60	6.63	6.01	6.98	7.37
	6H	10.95	11.89	11.36	12.26	12.66	5.74	6.69	6.16	7.06	7.45
	8H	10.90	11.79	11.33	12.19	12.59	5.78	6.67	6.21	7.06	7.47
	12H	10.86	11.71	11.29	12.09	12.52	5.80	6.65	6.23	7.03	7.46
4H	2H	10.96	11.99	11.37	12.34	12.73	4.88	5.91	5.28	6.26	6.65
	3H	10.95	11.78	11.36	12.19	12.59	5.79	6.62	6.20	7.03	7.43
	4H	10.90	11.64	11.33	12.06	12.50	6.06	6.81	6.50	7.23	7.67
	6H	10.84	11.48	11.30	11.92	12.39	6.28	6.92	6.74	7.36	7.83
	8H	10.79	11.38	11.26	11.83	12.30	6.34	6.94	6.81	7.39	7.86
	12H	10.74	11.26	11.23	11.75	12.22	6.38	6.90	6.87	7.39	7.86
8H	4H	10.78	11.38	11.25	11.83	12.30	6.05	6.64	6.52	7.09	7.56
	6H	10.72	11.20	11.22	11.70	12.19	6.32	6.80	6.82	7.30	7.78
	8H	10.67	11.10	11.19	11.62	12.11	6.43	6.86	6.95	7.38	7.87
	12H	10.63	11.01	11.15	11.51	12.08	6.50	6.88	7.01	7.38	7.95
12H	4H	10.74	11.26	11.22	11.74	12.22	6.01	6.53	6.50	7.02	7.49
	6H	10.66	11.10	11.19	11.62	12.11	6.28	6.71	6.80	7.23	7.72
	8H	10.63	11.02	11.15	11.51	12.09	6.42	6.80	6.94	7.30	7.87