

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: P1059712

Luminaire Tested: S123RDR-H560D935-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059712  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H560D935-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

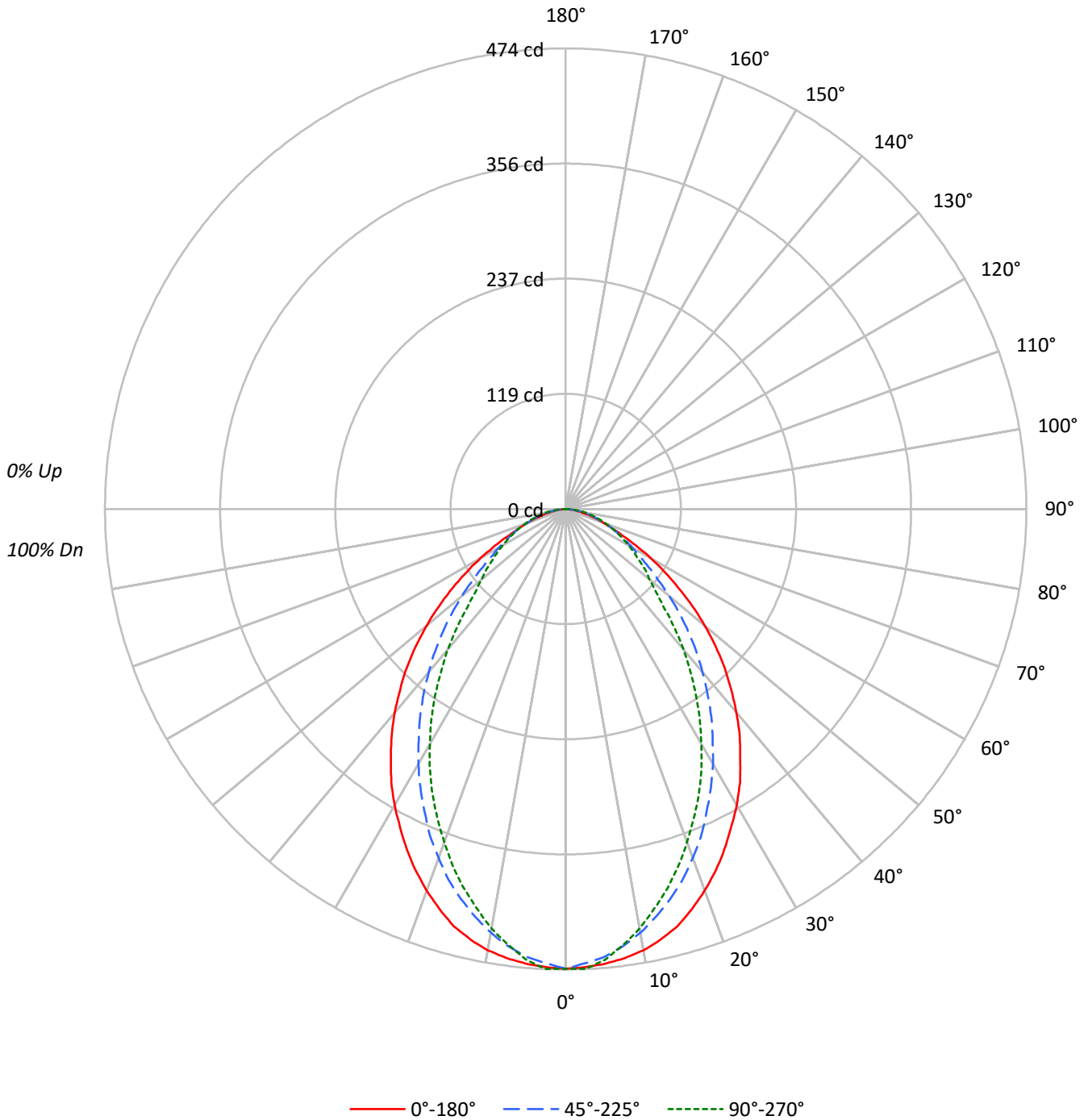
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 827.4 lumens  
Efficiency: N/A  
Efficacy: 47.6 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09  
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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

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

	0°	45°	90°
0°	5555	5555	5555
5°	5536	5455	5489
10°	5498	5281	5227
15°	5405	5052	4915
20°	5222	4775	4561
25°	5009	4449	4199
30°	4773	4110	3786
35°	4491	3741	3350
40°	4192	3355	2885
45°	3843	2964	2370
50°	3407	2545	2057
55°	2899	2131	1885
60°	2363	1855	1750
65°	1800	1642	1628
70°	1404	1463	1521
75°	1134	1316	1420
80°	845	1075	1305
85°	458	687	1145

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3843 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.9	5.3
10°-20°	118.1	14.3
20°-30°	160.6	19.4
30°-40°	166.5	20.1
40°-50°	140.4	17.0
50°-60°	99.7	12.0
60°-70°	60.9	7.4
70°-80°	30.3	3.7
80°-90°	6.9	0.8
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°	322.7	39.0
0°-40°	489.2	59.1
0°-60°	729.3	88.1
0°-90°	827.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	827.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	473	473	473	473	473	
5°	470	470	463	466	466	45
15°	445	436	416	408	404	125
25°	387	370	343	331	324	178
35°	313	289	261	243	234	196
45°	231	207	178	154	143	178
55°	142	127	104	95	92	127
65°	65	62	59	59	59	66
75°	25	27	29	30	31	27
85°	3	4	5	7	8	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	473.1	473.1	473.1	473.1	473.1
2.5°	471.9	472.5	467.9	473.1	473.6
5°	469.7	469.7	462.8	465.7	465.7
7.5°	466.2	465.1	453.7	453.7	452.6
10°	461.1	457.7	442.9	440.1	438.4
12.5°	453.7	448.0	429.8	424.7	421.3
15°	444.6	436.1	415.6	408.2	404.3
17.5°	431.6	423.0	400.3	390.0	385.5
20°	417.9	405.4	382.1	371.9	365.0
22.5°	403.1	387.2	364.5	352.0	344.6
25°	386.6	369.6	343.4	330.9	324.1
27.5°	369.0	350.2	323.5	309.3	302.5
30°	352.0	330.3	303.1	287.1	279.2
32.5°	333.8	309.3	281.4	265.0	257.0
35°	313.3	289.4	261.0	242.8	233.7
37.5°	294.0	269.5	239.9	220.6	210.4
40°	273.5	249.0	218.9	199.0	188.2
42.5°	251.9	228.6	199.0	175.7	165.5
45°	231.4	207.0	178.5	154.1	142.7
47.5°	209.2	186.5	158.6	133.6	125.7
50°	186.5	165.5	139.3	116.6	112.6
52.5°	164.3	146.7	120.0	105.2	103.5
55°	141.6	126.8	104.1	95.0	92.1
57.5°	120.5	109.7	89.3	84.7	83.6
60°	100.6	91.5	79.0	76.2	74.5
62.5°	81.3	76.2	68.8	67.7	66.5
65°	64.8	62.5	59.1	59.1	58.6
67.5°	51.2	51.2	50.6	51.7	51.2
70°	40.9	41.5	42.6	43.8	44.3
72.5°	32.4	34.1	35.3	37.0	37.5
75°	25.0	26.7	29.0	30.1	31.3
77.5°	18.2	19.9	22.2	23.9	25.0
80°	12.5	13.6	15.9	18.2	19.3
82.5°	8.0	8.5	10.2	12.5	13.6
85°	3.4	4.0	5.1	7.4	8.5
87.5°	0.0	0.0	0.6	2.3	4.0
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	14.76	16.21	15.13	16.53	16.84	12.86	14.31	13.23	14.63	14.94
	3H	15.66	16.96	16.04	17.29	17.65	14.44	15.73	14.81	16.06	16.42
	4H	15.94	17.16	16.35	17.51	17.89	15.03	16.24	15.43	16.59	16.97
	6H	16.09	17.21	16.51	17.58	17.97	15.48	16.60	15.89	16.97	17.36
	8H	16.12	17.18	16.55	17.57	17.97	15.63	16.69	16.06	17.08	17.48
	12H	16.11	17.13	16.54	17.51	17.94	15.73	16.74	16.16	17.13	17.56
4H	2H	15.01	16.22	15.41	16.57	16.95	13.40	14.62	13.80	14.96	15.35
	3H	16.12	17.12	16.53	17.52	17.93	15.18	16.18	15.59	16.58	16.98
	4H	16.51	17.41	16.95	17.83	18.27	15.89	16.79	16.32	17.20	17.64
	6H	16.75	17.53	17.21	17.98	18.44	16.46	17.24	16.92	17.68	18.15
	8H	16.80	17.52	17.26	17.97	18.44	16.65	17.38	17.12	17.82	18.29
	12H	16.80	17.45	17.29	17.93	18.40	16.79	17.44	17.27	17.92	18.39
8H	4H	16.67	17.40	17.14	17.84	18.31	16.10	16.83	16.56	17.27	17.74
	6H	16.98	17.58	17.48	18.07	18.55	16.77	17.37	17.27	17.87	18.34
	8H	17.06	17.59	17.57	18.11	18.60	17.03	17.57	17.55	18.08	18.57
	12H	17.09	17.57	17.60	18.06	18.63	17.24	17.71	17.75	18.21	18.77
12H	4H	16.67	17.32	17.16	17.80	18.27	16.10	16.74	16.58	17.22	17.70
	6H	17.00	17.53	17.51	18.05	18.53	16.78	17.32	17.30	17.83	18.32
	8H	17.11	17.58	17.62	18.08	18.65	17.09	17.56	17.60	18.05	18.62