

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: P1059659

Luminaire Tested: S123RDR-H560D830-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059659  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67 )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H560D830-X4F0-XX-UDD-WVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

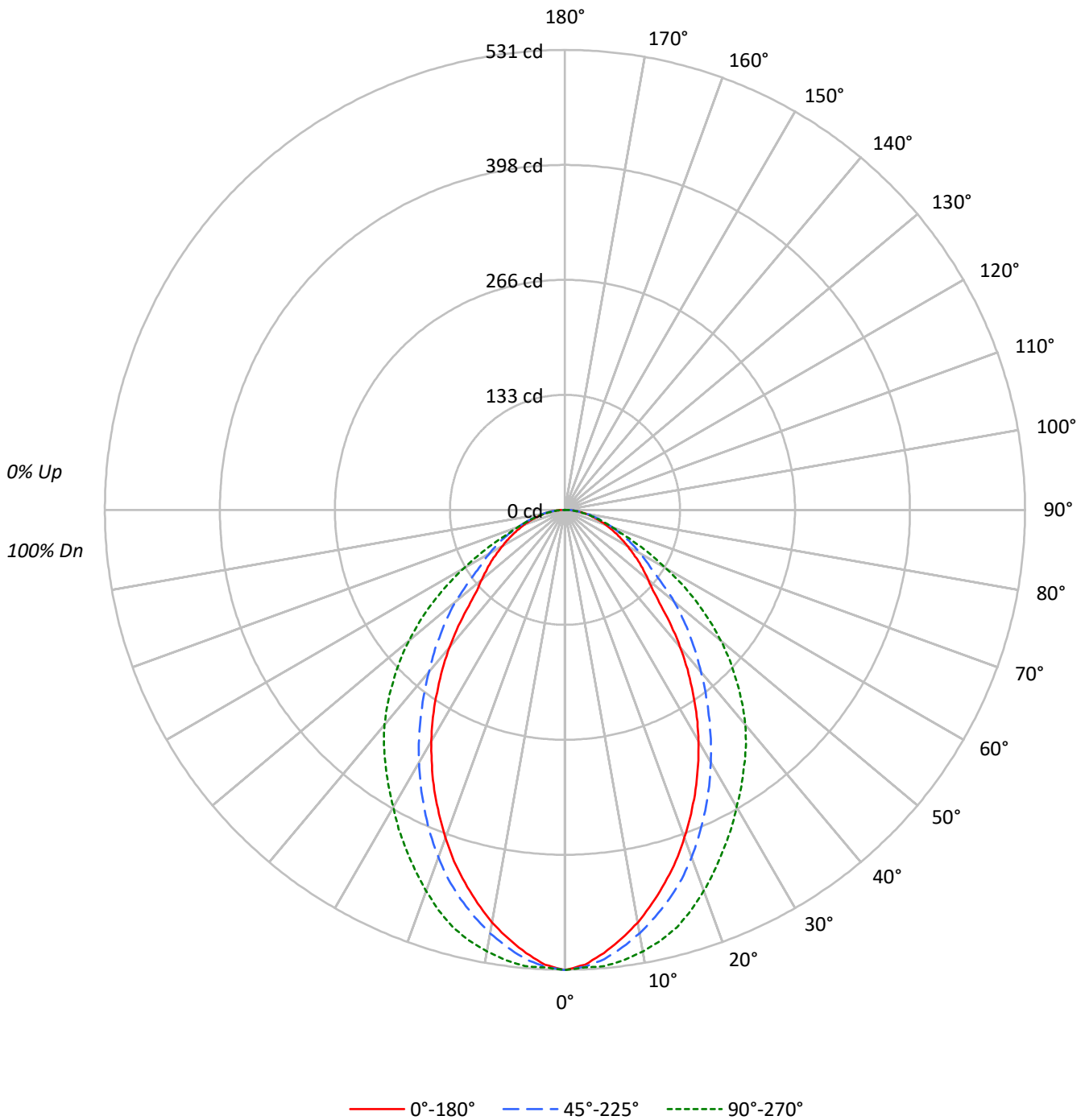
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 959.7 lumens  
Efficiency: N/A  
Efficacy: 55.2 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1  
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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57				
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51				
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45				
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41				
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31				

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

	0°	45°	90°
0°	6239	6239	6239
5°	6056	6138	6233
10°	5770	5919	6172
15°	5421	5655	6065
20°	5036	5338	5853
25°	4624	4962	5609
30°	4180	4568	5371
35°	3687	4151	5169
40°	3170	3742	4965
45°	2606	3371	4655
50°	2287	3003	4289
55°	2117	2563	3800
60°	1945	2356	3145
65°	1817	2164	2476
70°	1710	1967	1967
75°	1611	1810	1697
80°	1515	1643	1434
85°	1428	1590	1091

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4655 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.1	5.1
10°-20°	131.7	13.7
20°-30°	178.5	18.6
30°-40°	186.7	19.5
40°-50°	161.9	16.9
50°-60°	120.4	12.6
60°-70°	77.3	8.1
70°-80°	41.4	4.3
80°-90°	12.5	1.3
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°	359.4	37.4
0°-40°	546.0	56.9
0°-60°	828.4	86.3
0°-90°	959.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	959.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	531	531	531	531	531	
5°	514	522	521	524	529	48
15°	446	456	465	484	499	125
25°	357	368	383	409	433	164
35°	257	270	290	326	361	161
45°	157	169	203	247	280	123
55°	103	106	125	161	186	93
65°	65	71	78	83	89	65
75°	36	41	40	38	37	38
85°	11	13	12	10	8	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	531.3	531.3	531.3	531.3	531.3
2.5°	525.7	533.1	528.1	528.1	528.8
5°	513.8	522.5	520.7	524.4	528.8
7.5°	499.5	508.8	509.5	518.2	524.4
10°	483.9	493.3	496.4	508.8	517.6
12.5°	465.2	475.8	481.4	497.0	509.5
15°	445.9	456.5	465.2	483.9	498.9
17.5°	425.4	436.0	447.2	468.4	484.5
20°	403.0	414.2	427.2	448.4	468.4
22.5°	379.9	391.7	405.5	428.5	450.9
25°	356.9	368.1	383.0	408.6	432.9
27.5°	332.6	344.4	360.0	388.0	415.4
30°	308.3	320.1	336.9	366.8	396.1
32.5°	283.4	295.2	313.3	346.9	378.7
35°	257.2	269.7	289.6	326.4	360.6
37.5°	232.3	244.1	266.6	307.0	343.2
40°	206.8	219.2	244.1	287.7	323.9
42.5°	181.9	194.3	223.6	267.2	302.7
45°	156.9	168.8	203.0	246.6	280.3
47.5°	137.6	146.4	183.7	224.8	258.5
50°	125.2	128.3	164.4	203.7	234.8
52.5°	114.0	116.5	143.2	182.5	210.5
55°	103.4	105.9	125.2	160.7	185.6
57.5°	92.8	95.9	111.5	138.3	160.7
60°	82.8	86.6	100.3	118.3	133.9
62.5°	74.1	78.5	89.1	100.3	110.9
65°	65.4	71.0	77.9	82.8	89.1
67.5°	57.3	63.5	67.3	68.5	69.1
70°	49.8	56.1	57.3	57.3	57.3
72.5°	42.4	49.2	48.0	47.3	46.7
75°	35.5	41.1	39.9	38.0	37.4
77.5°	28.6	33.6	31.8	30.5	28.6
80°	22.4	26.2	24.3	23.0	21.2
82.5°	16.8	19.3	17.4	16.2	14.3
85°	10.6	13.1	11.8	10.0	8.1
87.5°	5.6	7.5	6.2	5.6	3.1
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	13.15	14.63	13.51	14.94	15.26	15.90	17.39	16.27	17.70	18.01
	3H	14.86	16.18	15.23	16.51	16.88	16.92	18.25	17.30	18.58	18.94
	4H	15.52	16.76	15.92	17.11	17.49	17.29	18.53	17.69	18.88	19.26
	6H	16.02	17.17	16.43	17.53	17.93	17.54	18.69	17.96	19.06	19.45
	8H	16.19	17.29	16.62	17.68	18.08	17.61	18.71	18.04	19.10	19.50
	12H	16.32	17.37	16.75	17.75	18.18	17.65	18.70	18.08	19.08	19.51
4H	2H	13.92	15.17	14.32	15.52	15.90	16.18	17.42	16.58	17.77	18.15
	3H	15.85	16.88	16.26	17.28	17.68	17.43	18.46	17.84	18.86	19.26
	4H	16.66	17.59	17.09	18.00	18.44	17.92	18.85	18.35	19.26	19.70
	6H	17.30	18.11	17.76	18.55	19.01	18.30	19.10	18.75	19.55	20.01
	8H	17.53	18.28	17.99	18.73	19.19	18.41	19.16	18.87	19.61	20.07
	12H	17.70	18.37	18.18	18.85	19.32	18.48	19.15	18.96	19.63	20.10
8H	4H	16.98	17.73	17.44	18.18	18.65	18.11	18.86	18.57	19.31	19.78
	6H	17.77	18.39	18.27	18.89	19.36	18.59	19.22	19.09	19.71	20.19
	8H	18.10	18.66	18.61	19.17	19.66	18.77	19.33	19.29	19.84	20.33
	12H	18.38	18.87	18.89	19.36	19.93	18.90	19.40	19.41	19.89	20.46
12H	4H	17.00	17.68	17.49	18.16	18.63	18.12	18.80	18.61	19.28	19.75
	6H	17.82	18.39	18.34	18.90	19.38	18.63	19.19	19.15	19.70	20.19
	8H	18.22	18.71	18.73	19.21	19.77	18.86	19.36	19.37	19.85	20.41