

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: P1059690

Luminaire Tested: S123RDR-H560D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059690  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H560D927-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

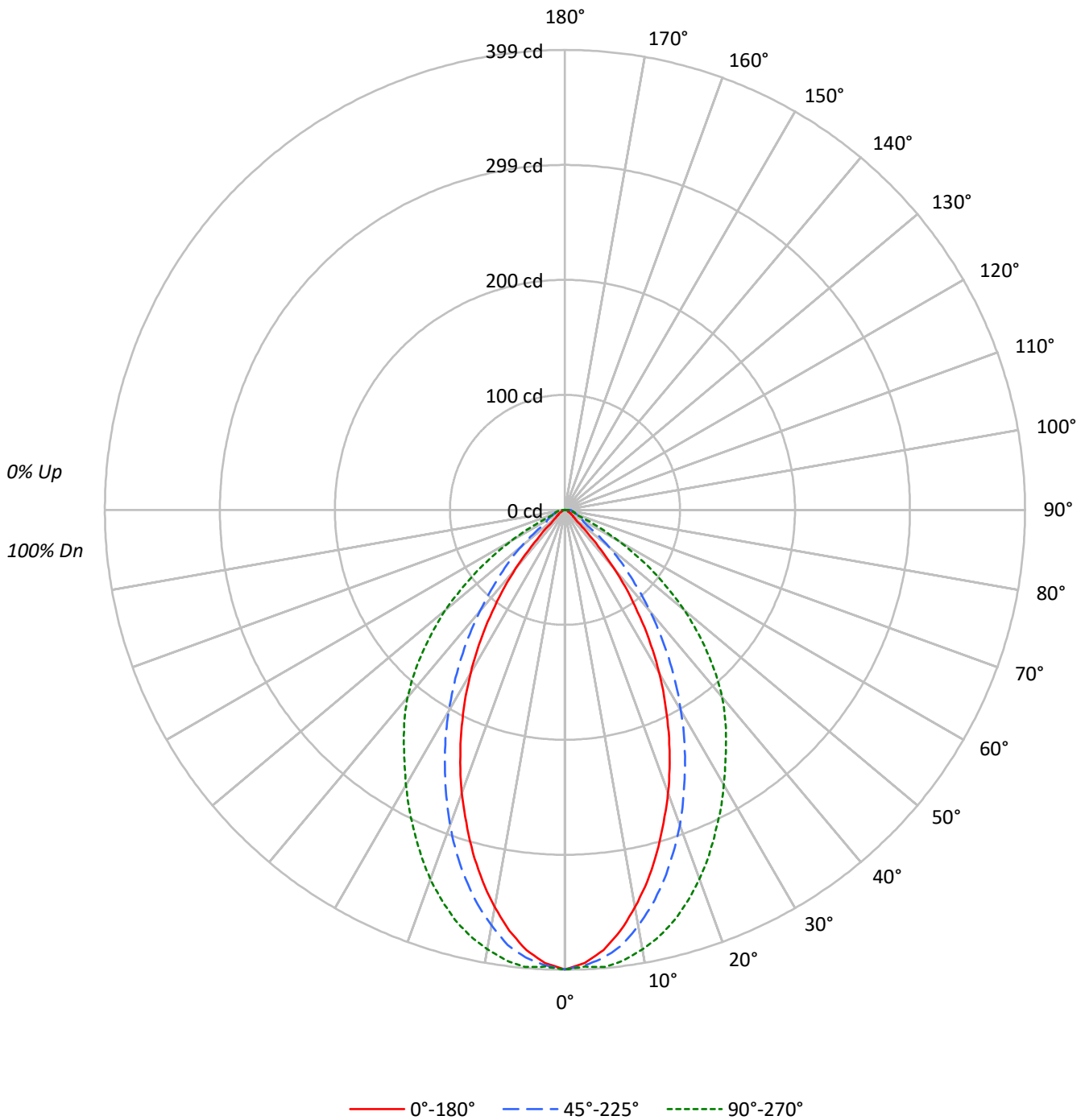
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 478.7 lumens  
Efficiency: N/A  
Efficacy: 27.5 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										
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	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	100	100	100	100	100														
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90	90	90	90	90	90	90														
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81	81	81	81	81	81	81														
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73	73	73	73	73	73	73														
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66	66	66	66	66	66	66														
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60	60	60	60	60	60	60														
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55	55	55	55	55	55	55														
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50	50	50	50	50	50	50														
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47	47	47	47	47	47	47														
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43	43	43	43	43	43	43														
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40	40	40	40	40	40	40														

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

	0°	45°	90°
0°	4682	4682	4682
5°	4520	4595	4694
10°	4173	4366	4617
15°	3745	4038	4477
20°	3268	3640	4262
25°	2756	3191	3998
30°	2217	2728	3737
35°	1623	2246	3492
40°	1012	1751	3253
45°	384	1305	2898
50°	183	901	2470
55°	139	493	1910
60°	99	418	1254
65°	72	364	525
70°	72	343	343
75°	95	358	358
80°	142	426	392
85°	283	701	566

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2898 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.6	7.6
10°-20°	93.9	19.6
20°-30°	116.2	24.3
30°-40°	104.2	21.8
40°-50°	68.3	14.3
50°-60°	34.2	7.1
60°-70°	13.3	2.8
70°-80°	7.5	1.6
80°-90°	4.6	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°	246.6	51.5
0°-40°	350.8	73.3
0°-60°	453.3	94.7
0°-90°	478.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	478.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	399	399	399	399	399	
5°	384	390	390	394	398	36
15°	308	321	332	354	368	86
25°	213	226	246	281	309	97
35°	113	128	157	204	244	70
45°	23	37	79	135	174	22
55°	7	8	24	66	93	6
65°	3	8	13	17	19	3
75°	2	8	8	8	8	2
85°	2	5	5	5	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	398.7	398.7	398.7	398.7	398.7
2.5°	393.5	399.3	395.6	396.1	396.6
5°	383.5	389.8	389.8	394.0	398.2
7.5°	368.3	375.7	380.9	388.3	394.0
10°	350.0	358.9	366.2	379.3	387.2
12.5°	330.1	341.1	350.5	367.8	378.8
15°	308.1	320.7	332.2	354.2	368.3
17.5°	284.5	297.1	312.3	338.0	355.2
20°	261.5	274.0	291.3	320.1	341.1
22.5°	237.4	250.5	268.8	300.8	325.4
25°	212.7	225.8	246.3	281.4	308.6
27.5°	188.1	201.2	224.3	262.5	292.4
30°	163.5	176.6	201.2	242.1	275.6
32.5°	138.8	153.0	178.7	223.2	258.8
35°	113.2	128.4	156.7	203.8	243.6
37.5°	89.6	103.7	135.7	187.1	228.4
40°	66.0	81.2	114.2	170.8	212.2
42.5°	43.0	59.2	94.8	153.0	193.9
45°	23.1	37.2	78.6	134.7	174.5
47.5°	12.6	20.4	63.4	115.3	154.6
50°	10.0	11.5	49.3	98.5	135.2
52.5°	8.4	9.4	35.1	82.8	113.7
55°	6.8	8.4	24.1	66.0	93.3
57.5°	5.8	7.3	18.9	51.3	72.8
60°	4.2	6.3	17.8	37.7	53.4
62.5°	3.1	6.8	15.7	26.2	35.1
65°	2.6	7.9	13.1	17.3	18.9
67.5°	2.1	8.4	11.5	11.0	11.0
70°	2.1	7.9	10.0	9.4	10.0
72.5°	2.1	8.4	8.9	8.4	8.9
75°	2.1	7.9	7.9	7.9	7.9
77.5°	2.1	7.3	7.3	6.8	6.8
80°	2.1	6.3	6.3	6.3	5.8
82.5°	2.1	5.8	5.8	5.8	4.7
85°	2.1	5.2	5.2	5.2	4.2
87.5°	1.6	4.7	5.2	4.7	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	0.00	0.00	0.00	0.00	0.00	11.96	13.22	12.33	13.53	13.85
	3H	0.05	1.16	0.43	1.49	1.86	12.04	13.15	12.42	13.48	13.85
	4H	1.16	2.20	1.57	2.55	2.93	12.12	13.16	12.53	13.51	13.89
	6H	2.15	3.10	2.57	3.47	3.87	12.23	13.18	12.64	13.55	13.94
	8H	2.64	3.53	3.07	3.92	4.33	12.29	13.18	12.72	13.57	13.98
	12H	3.19	4.05	3.63	4.43	4.86	12.37	13.22	12.80	13.61	14.04
4H	2H	0.96	2.00	1.37	2.35	2.73	11.82	12.85	12.22	13.20	13.59
	3H	3.30	4.14	3.71	4.55	4.95	11.99	12.84	12.41	13.24	13.65
	4H	4.67	5.43	5.11	5.85	6.29	12.15	12.90	12.58	13.32	13.77
	6H	5.75	6.41	6.22	6.85	7.32	12.37	13.03	12.84	13.47	13.94
	8H	6.21	6.82	6.68	7.27	7.74	12.50	13.11	12.97	13.56	14.03
	12H	6.71	7.24	7.19	7.73	8.20	12.67	13.21	13.16	13.69	14.17
8H	4H	5.64	6.25	6.11	6.70	7.17	12.14	12.75	12.61	13.20	13.67
	6H	7.16	7.66	7.66	8.16	8.64	12.48	12.98	12.99	13.48	13.96
	8H	7.94	8.39	8.46	8.91	9.40	12.72	13.17	13.24	13.68	14.18
	12H	8.74	9.14	9.25	9.63	10.20	13.05	13.45	13.57	13.94	14.52
12H	4H	5.82	6.36	6.31	6.84	7.32	12.13	12.67	12.62	13.15	13.63
	6H	7.48	7.93	8.00	8.44	8.94	12.50	12.95	13.03	13.47	13.96
	8H	8.44	8.84	8.95	9.33	9.90	12.82	13.21	13.33	13.71	14.28