

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059653

Luminaire Tested: S123RDRP-H560D830-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059653  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-H560D830-X4F0-XX-UDD-BVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

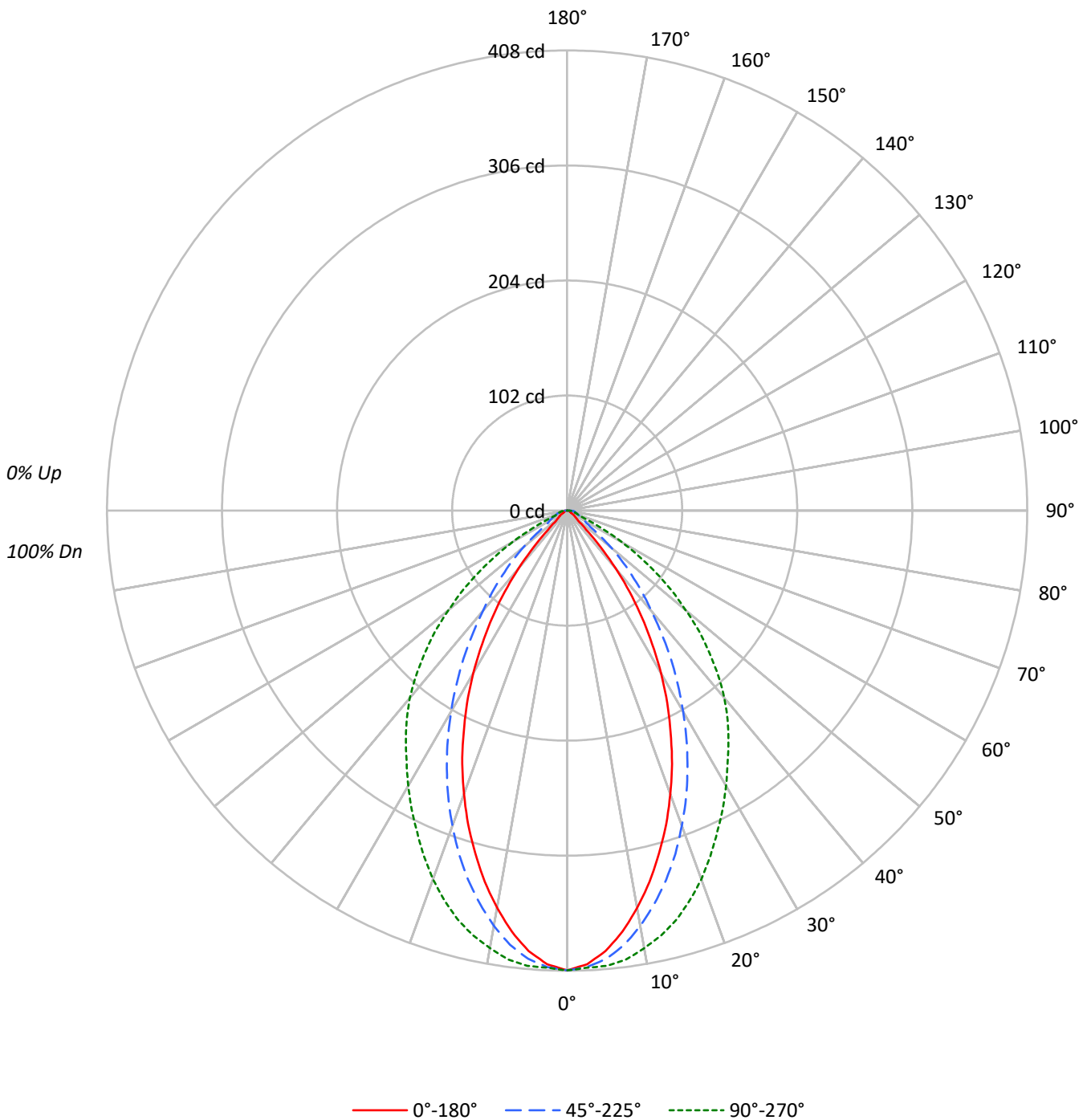
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 489.6 lumens  
Efficiency: N/A  
Efficacy: 28.1 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 (A<sub>in</sub>): 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	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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																												
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81																												
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73																												
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66																												
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60																												
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55																												
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50																												
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46																												
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43																												
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40																												

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

	0°	45°	90°
0°	4786	4786	4786
5°	4621	4702	4775
10°	4265	4458	4697
15°	3826	4121	4561
20°	3341	3715	4346
25°	2810	3270	4077
30°	2256	2789	3820
35°	1653	2296	3574
40°	1022	1786	3325
45°	394	1345	2959
50°	194	923	2505
55°	154	510	1965
60°	103	425	1318
65°	86	381	589
70°	86	343	343
75°	113	367	340
80°	169	467	379
85°	256	754	498

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 2959 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.4	7.6
10°-20°	95.7	19.5
20°-30°	118.7	24.3
30°-40°	106.4	21.7
40°-50°	69.9	14.3
50°-60°	35.0	7.2
60°-70°	13.8	2.8
70°-80°	7.7	1.6
80°-90°	4.9	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°	251.8	51.4
0°-40°	358.2	73.2
0°-60°	463.1	94.6
0°-90°	489.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	489.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	392	398	399	401	405	36
15°	315	325	339	362	375	88
25°	217	231	252	288	315	99
35°	115	131	160	209	249	72
45°	24	39	81	136	178	22
55°	8	9	25	67	96	7
65°	3	9	14	18	21	3
75°	2	8	8	8	8	3
85°	2	6	6	6	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	407.6	407.6	407.6	407.6	407.6
2.5°	402.6	408.2	405.1	405.1	405.7
5°	392.0	398.2	398.9	401.4	405.1
7.5°	376.4	384.5	388.3	395.8	401.4
10°	357.7	366.5	373.9	387.0	393.9
12.5°	337.2	345.9	357.1	375.2	385.8
15°	314.7	324.7	339.0	362.1	375.2
17.5°	291.7	301.6	319.1	345.3	362.1
20°	267.4	278.6	297.3	327.2	347.8
22.5°	243.1	255.5	275.5	307.9	331.6
25°	216.9	230.6	252.4	287.9	314.7
27.5°	192.0	206.3	229.3	268.0	298.5
30°	166.4	180.7	205.7	247.4	281.7
32.5°	140.2	156.4	182.6	228.1	264.9
35°	115.3	130.9	160.2	209.4	249.3
37.5°	91.0	106.6	137.1	191.3	233.7
40°	66.7	82.9	116.5	173.9	216.9
42.5°	43.6	60.5	98.5	156.4	198.2
45°	23.7	39.3	81.0	136.5	178.2
47.5°	13.1	21.2	65.4	117.8	158.9
50°	10.6	11.8	50.5	100.3	137.1
52.5°	8.7	10.0	36.1	83.5	117.2
55°	7.5	8.7	24.9	67.3	96.0
57.5°	6.2	7.5	19.9	51.7	75.4
60°	4.4	7.5	18.1	38.0	56.1
62.5°	3.7	7.5	15.6	26.2	37.4
65°	3.1	8.7	13.7	17.5	21.2
67.5°	2.5	8.7	11.8	11.2	11.2
70°	2.5	8.7	10.0	9.3	10.0
72.5°	2.5	9.3	9.3	8.7	8.7
75°	2.5	8.1	8.1	7.5	7.5
77.5°	2.5	7.5	7.5	6.9	6.9
80°	2.5	6.9	6.9	6.2	5.6
82.5°	2.5	6.2	6.2	5.6	5.0
85°	1.9	5.6	5.6	5.6	3.7
87.5°	1.9	5.0	5.6	5.0	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	11.98	13.24	12.35	13.55	13.87
	3H	0.42	1.53	0.80	1.86	2.23	12.06	13.17	12.44	13.50	13.87
	4H	1.59	2.62	1.99	2.97	3.36	12.13	13.16	12.53	13.51	13.90
	6H	2.65	3.60	3.06	3.97	4.36	12.22	13.18	12.64	13.55	13.94
	8H	3.19	4.09	3.62	4.48	4.88	12.29	13.18	12.72	13.58	13.98
	12H	3.67	4.53	4.10	4.91	5.35	12.35	13.21	12.79	13.60	14.03
4H	2H	1.16	2.20	1.56	2.55	2.93	11.84	12.88	12.25	13.23	13.61
	3H	3.61	4.46	4.03	4.87	5.27	12.02	12.86	12.43	13.27	13.67
	4H	4.96	5.72	5.40	6.14	6.58	12.15	12.90	12.58	13.32	13.77
	6H	6.10	6.76	6.57	7.20	7.67	12.36	13.02	12.83	13.46	13.93
	8H	6.61	7.22	7.08	7.67	8.14	12.49	13.10	12.96	13.55	14.02
	12H	7.07	7.61	7.56	8.10	8.57	12.65	13.18	13.13	13.67	14.14
8H	4H	5.88	6.49	6.35	6.94	7.41	12.15	12.76	12.62	13.21	13.68
	6H	7.49	7.99	8.00	8.49	8.97	12.48	12.98	12.98	13.48	13.96
	8H	8.31	8.76	8.84	9.28	9.77	12.71	13.16	13.23	13.68	14.17
	12H	9.09	9.49	9.61	9.99	10.56	13.03	13.43	13.55	13.93	14.50
12H	4H	6.05	6.59	6.54	7.07	7.55	12.14	12.68	12.63	13.16	13.64
	6H	7.81	8.26	8.33	8.77	9.27	12.51	12.96	13.03	13.48	13.97
	8H	8.81	9.21	9.32	9.70	10.28	12.82	13.22	13.34	13.71	14.29