

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: P1059278

Luminaire Tested: S123RDRP-S560D850-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059278  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-68)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDRP-S560D850-X4F0-XX-UDD-SVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

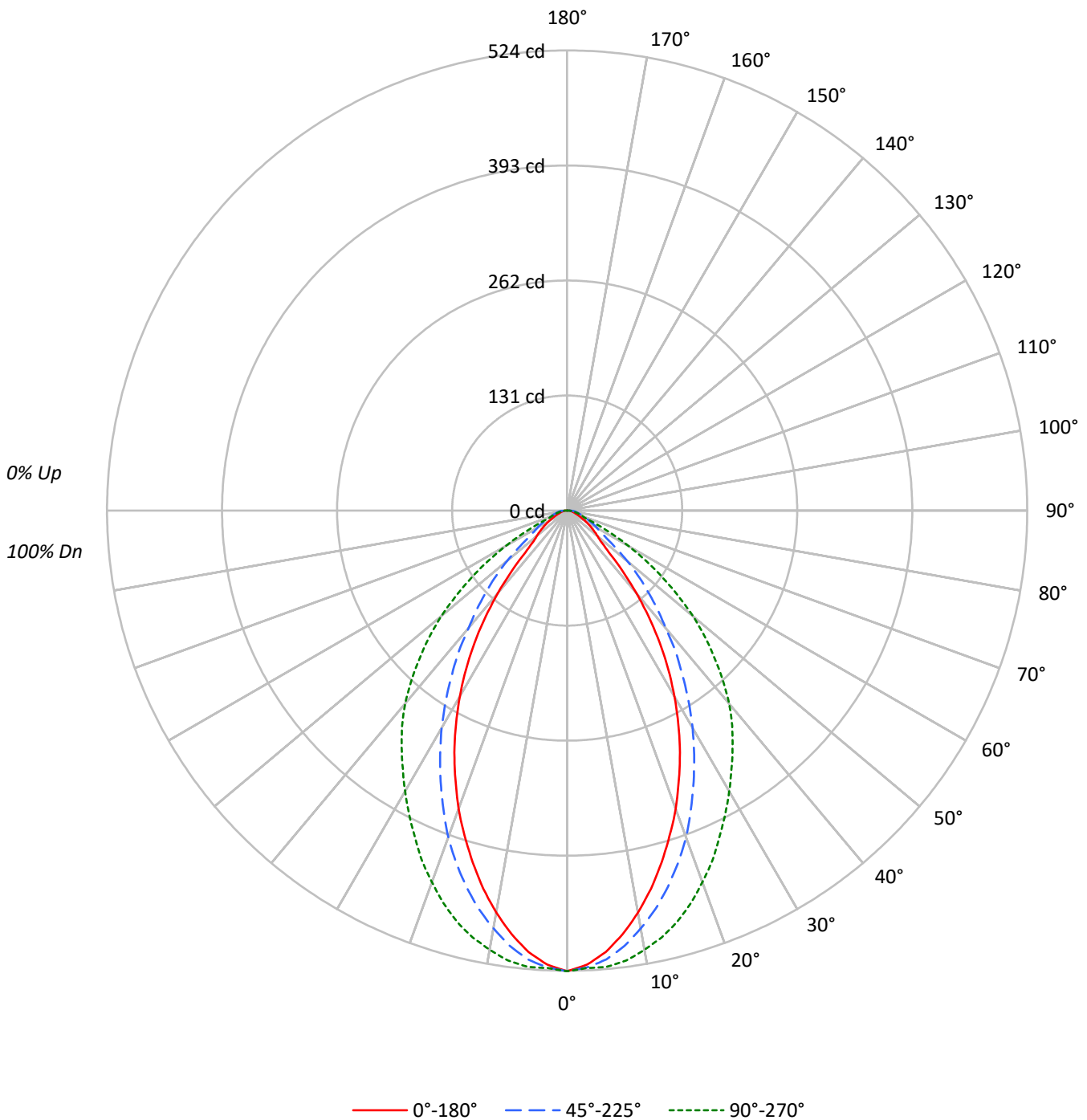
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 702.5 lumens  
Efficiency: N/A  
Efficacy: 35.8 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 1.07 / 0.98  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.6  
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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79					79			
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71					71			
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64					64			
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58					58			
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52					52			
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48					48			
8	70	58	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44					44			
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40					40			
10	62	51	44	39	61	50	44	39	50	43	39	49	43	39	48	43	39	37					37			

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

	0°	45°	90°
0°	6159	6159	6159
5°	5948	6047	6146
10°	5542	5761	6054
15°	5045	5389	5892
20°	4516	4947	5626
25°	3939	4414	5317
30°	3312	3872	5005
35°	2635	3281	4709
40°	1878	2676	4401
45°	1119	2149	3942
50°	826	1637	3412
55°	690	1114	2713
60°	557	918	1907
65°	447	786	1022
70°	367	683	632
75°	349	658	590
80°	365	724	568
85°	512	1037	728

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3942 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.2	6.9
10°-20°	125.2	17.8
20°-30°	159.7	22.7
30°-40°	150.2	21.4
40°-50°	107.9	15.4
50°-60°	61.9	8.8
60°-70°	28.3	4.0
70°-80°	14.2	2.0
80°-90°	6.9	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°	333.0	47.4
0°-40°	483.2	68.8
0°-60°	653.0	93.0
0°-90°	702.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	702.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	524	524	524	524	524	
5°	505	514	513	517	521	47
15°	415	430	443	467	485	116
25°	304	318	341	378	410	139
35°	184	197	229	281	328	114
45°	67	82	129	191	237	56
55°	34	34	54	100	132	30
65°	16	22	28	31	37	16
75°	8	15	14	13	13	8
85°	4	8	8	7	5	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	524.5	524.5	524.5	524.5	524.5
2.5°	517.6	525.3	520.7	520.7	521.4
5°	504.6	514.5	513.0	516.8	521.4
7.5°	486.2	496.9	500.0	509.2	516.8
10°	464.8	477.0	483.2	497.7	507.7
12.5°	441.0	454.8	464.8	483.2	497.7
15°	415.0	429.6	443.3	467.1	484.7
17.5°	388.2	402.8	420.4	447.9	468.6
20°	361.4	376.0	395.9	425.0	450.2
22.5°	332.3	346.9	368.3	401.2	431.9
25°	304.0	317.8	340.7	377.5	410.4
27.5°	274.1	287.9	313.2	353.0	389.7
30°	244.3	258.0	285.6	328.5	369.1
32.5°	214.4	227.4	257.3	304.7	348.4
35°	183.8	196.8	228.9	281.0	328.5
37.5°	152.4	165.4	202.9	259.6	308.6
40°	122.5	137.1	174.6	238.1	287.1
42.5°	93.4	108.7	151.6	215.2	262.6
45°	67.4	81.9	129.4	190.7	237.4
47.5°	51.3	59.0	109.5	166.2	212.9
50°	45.2	45.9	89.6	144.0	186.8
52.5°	39.1	39.8	69.7	122.5	159.3
55°	33.7	34.5	54.4	100.3	132.5
57.5°	28.3	29.9	44.4	79.6	106.4
60°	23.7	26.8	39.1	60.5	81.2
62.5°	19.1	24.5	33.7	44.4	58.2
65°	16.1	22.2	28.3	31.4	36.8
67.5°	13.0	20.7	23.7	22.2	22.2
70°	10.7	18.4	19.9	18.4	18.4
72.5°	9.2	17.6	16.8	15.3	15.3
75°	7.7	15.3	14.5	13.0	13.0
77.5°	6.9	13.0	12.3	11.5	10.7
80°	5.4	10.7	10.7	10.0	8.4
82.5°	4.6	9.2	9.2	8.4	6.9
85°	3.8	7.7	7.7	6.9	5.4
87.5°	3.1	6.9	6.9	6.1	3.8
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	6.31	7.62	6.67	7.94	8.25	13.52	14.84	13.89	15.15	15.47
	3H	7.70	8.87	8.08	9.20	9.57	13.76	14.93	14.14	15.26	15.62
	4H	8.27	9.36	8.67	9.71	10.09	13.86	14.95	14.27	15.30	15.69
	6H	8.73	9.73	9.14	10.10	10.49	13.97	14.97	14.39	15.34	15.74
	8H	8.91	9.86	9.34	10.25	10.66	14.02	14.97	14.45	15.36	15.76
	12H	9.10	10.01	9.54	10.39	10.82	14.07	14.98	14.50	15.36	15.79
4H	2H	7.38	8.47	7.78	8.82	9.20	13.48	14.57	13.88	14.92	15.31
	3H	9.06	9.96	9.48	10.36	10.76	13.85	14.74	14.26	15.15	15.55
	4H	9.90	10.70	10.33	11.12	11.56	14.03	14.83	14.47	15.25	15.70
	6H	10.56	11.25	11.02	11.69	12.16	14.26	14.95	14.72	15.39	15.86
	8H	10.81	11.46	11.28	11.91	12.38	14.36	15.00	14.83	15.45	15.92
	12H	11.07	11.64	11.55	12.12	12.60	14.48	15.05	14.96	15.53	16.00
8H	4H	10.33	10.98	10.80	11.43	11.90	14.08	14.72	14.55	15.17	15.64
	6H	11.28	11.81	11.79	12.31	12.79	14.41	14.94	14.91	15.44	15.92
	8H	11.75	12.23	12.27	12.74	13.23	14.60	15.08	15.12	15.59	16.09
	12H	12.23	12.65	12.74	13.15	13.72	14.84	15.26	15.35	15.75	16.32
12H	4H	10.39	10.96	10.88	11.45	11.92	14.07	14.64	14.56	15.13	15.60
	6H	11.43	11.91	11.95	12.42	12.92	14.44	14.92	14.96	15.43	15.92
	8H	12.03	12.45	12.54	12.94	13.51	14.70	15.12	15.21	15.62	16.19