

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: P1059686

Luminaire Tested: S123RDR-H560D850-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059686  
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-H560D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

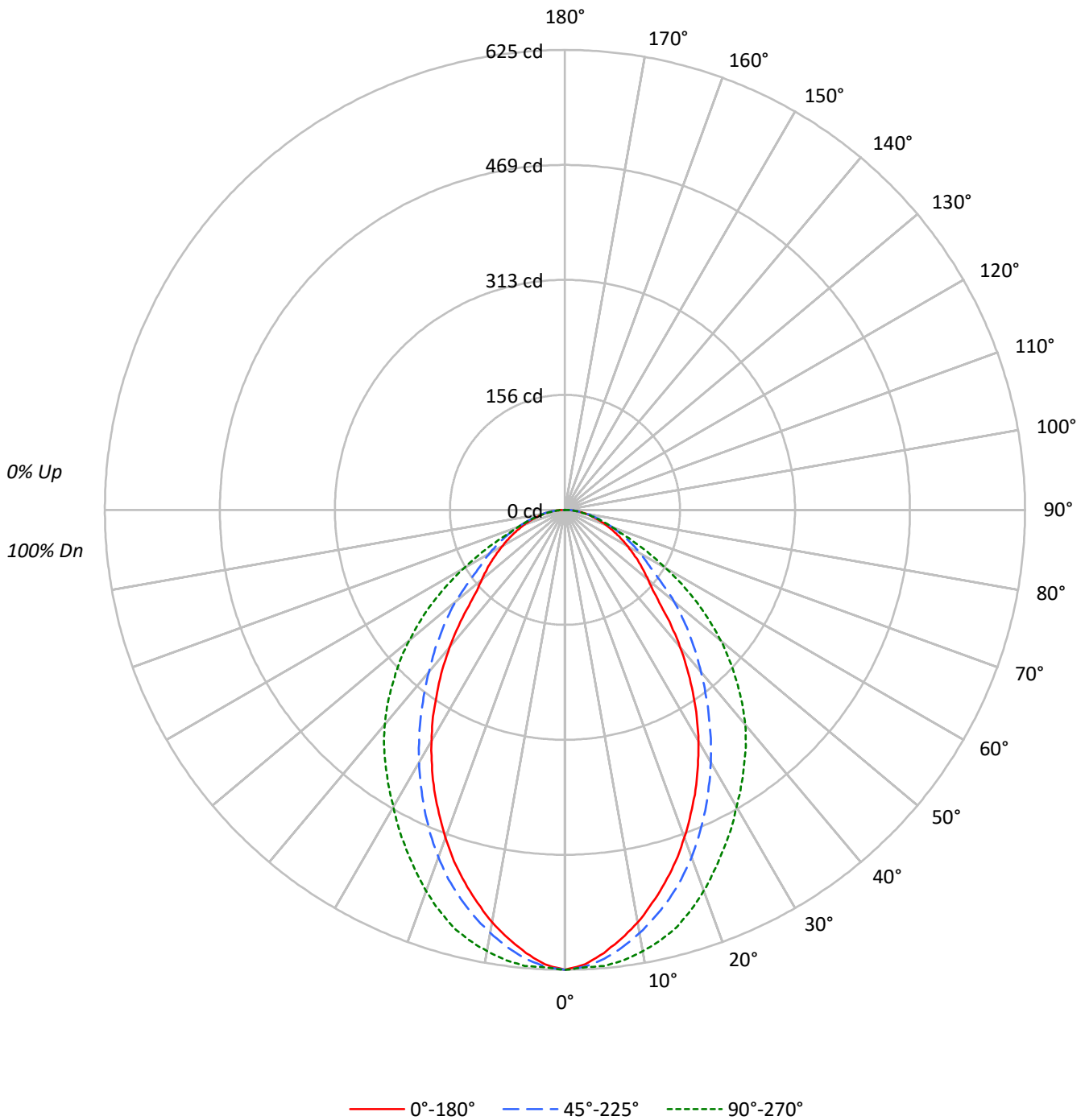
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1129.1 lumens  
Efficiency: N/A  
Efficacy: 64.9 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°	7340	7340	7340
5°	7127	7221	7334
10°	6789	6963	7261
15°	6379	6655	7136
20°	5924	6282	6887
25°	5440	5839	6599
30°	4918	5375	6320
35°	4338	4885	6082
40°	3729	4404	5842
45°	3067	3967	5477
50°	2691	3535	5047
55°	2489	3016	4471
60°	2290	2771	3701
65°	2137	2545	2912
70°	2012	2314	2314
75°	1896	2128	1996
80°	1785	1934	1684
85°	1684	1873	1280

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5477 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.8	5.1
10°-20°	154.9	13.7
20°-30°	210.1	18.6
30°-40°	219.6	19.5
40°-50°	190.5	16.9
50°-60°	141.7	12.6
60°-70°	90.9	8.1
70°-80°	48.8	4.3
80°-90°	14.7	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°	422.8	37.4
0°-40°	642.5	56.9
0°-60°	974.7	86.3
0°-90°	1129.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1129.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	625	625	625	625	625	
5°	605	615	613	617	622	57
15°	525	537	547	569	587	147
25°	420	433	451	481	509	193
35°	303	317	341	384	424	189
45°	185	199	239	290	330	145
55°	122	125	147	189	218	109
65°	77	84	92	98	105	77
75°	42	48	47	45	44	44
85°	12	15	14	12	10	14
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	625.1	625.1	625.1	625.1	625.1
2.5°	618.5	627.3	621.4	621.4	622.2
5°	604.6	614.8	612.6	617.0	622.2
7.5°	587.7	598.7	599.4	609.7	617.0
10°	569.4	580.4	584.0	598.7	609.0
12.5°	547.4	559.9	566.5	584.8	599.4
15°	524.7	537.1	547.4	569.4	587.0
17.5°	500.5	513.0	526.2	551.1	570.1
20°	474.1	487.3	502.7	527.6	551.1
22.5°	447.0	460.9	477.1	504.2	530.5
25°	419.9	433.1	450.7	480.7	509.3
27.5°	391.3	405.2	423.6	456.5	488.8
30°	362.7	376.7	396.4	431.6	466.1
32.5°	333.4	347.3	368.6	408.2	445.5
35°	302.6	317.3	340.8	384.0	424.3
37.5°	273.3	287.3	313.6	361.3	403.8
40°	243.3	257.9	287.3	338.6	381.1
42.5°	214.0	228.6	263.1	314.4	356.1
45°	184.7	198.6	238.9	290.2	329.8
47.5°	161.9	172.2	216.2	264.5	304.1
50°	147.3	151.0	193.5	239.6	276.3
52.5°	134.1	137.0	168.5	214.7	247.7
55°	121.6	124.6	147.3	189.1	218.4
57.5°	109.2	112.9	131.2	162.7	189.1
60°	97.5	101.9	118.0	139.2	157.6
62.5°	87.2	92.3	104.8	118.0	130.4
65°	76.9	83.5	91.6	97.5	104.8
67.5°	67.4	74.7	79.1	80.6	81.3
70°	58.6	66.0	67.4	67.4	67.4
72.5°	49.8	57.9	56.4	55.7	55.0
75°	41.8	48.4	46.9	44.7	44.0
77.5°	33.7	39.6	37.4	35.9	33.7
80°	26.4	30.8	28.6	27.1	24.9
82.5°	19.8	22.7	20.5	19.1	16.9
85°	12.5	15.4	13.9	11.7	9.5
87.5°	6.6	8.8	7.3	6.6	3.7
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	13.71	15.20	14.08	15.51	15.82	16.47	17.95	16.83	18.26	18.58
	3H	15.42	16.75	15.80	17.08	17.44	17.49	18.82	17.87	19.15	19.51
	4H	16.08	17.33	16.48	17.68	18.06	17.85	19.10	18.25	19.45	19.83
	6H	16.58	17.73	17.00	18.10	18.49	18.11	19.26	18.52	19.63	20.02
	8H	16.76	17.86	17.19	18.25	18.65	18.18	19.27	18.61	19.66	20.07
	12H	16.89	17.94	17.32	18.32	18.75	18.22	19.26	18.65	19.64	20.07
4H	2H	14.49	15.73	14.89	16.08	16.46	16.74	17.98	17.14	18.33	18.71
	3H	16.41	17.45	16.82	17.85	18.25	17.99	19.03	18.40	19.43	19.83
	4H	17.22	18.15	17.66	18.57	19.01	18.48	19.41	18.91	19.83	20.26
	6H	17.87	18.67	18.32	19.12	19.58	18.86	19.67	19.32	20.11	20.57
	8H	18.09	18.85	18.56	19.29	19.76	18.97	19.73	19.44	20.17	20.64
	12H	18.27	18.94	18.75	19.42	19.89	19.04	19.72	19.53	20.20	20.67
8H	4H	17.54	18.30	18.01	18.74	19.21	18.67	19.43	19.14	19.87	20.34
	6H	18.34	18.96	18.83	19.45	19.93	19.16	19.78	19.66	20.28	20.75
	8H	18.66	19.22	19.18	19.74	20.22	19.34	19.90	19.85	20.41	20.90
	12H	18.94	19.44	19.45	19.93	20.50	19.47	19.96	19.98	20.46	21.02
12H	4H	17.57	18.24	18.05	18.72	19.19	18.69	19.36	19.17	19.84	20.31
	6H	18.39	18.95	18.91	19.46	19.95	19.20	19.76	19.71	20.27	20.76
	8H	18.78	19.28	19.29	19.77	20.34	19.43	19.92	19.94	20.41	20.98