

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: P1059539

Luminaire Tested: S123RDR-H1165D930-X4F0-XX-UDD-SVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059539  
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: S123RDR-H1165D930-X4F0-XX-UDD-SVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

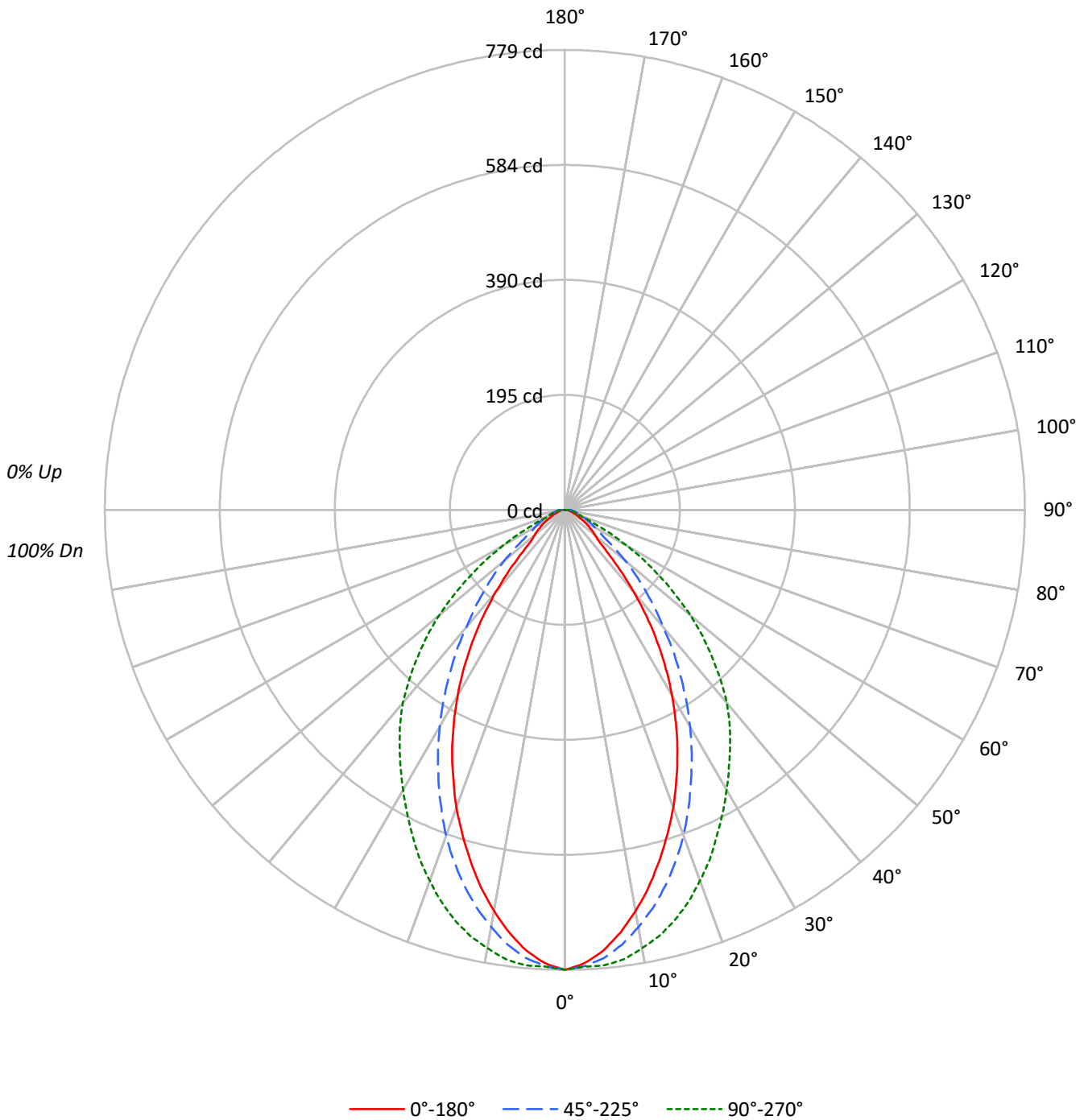
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1043.3 lumens  
Efficiency: N/A  
Efficacy: 28.6 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): 36.5  
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	111	108	105	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89				
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				
4	91	81	74	69	88	80	73	68	77	72	67	75	70	66	73	69	66	64				
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	58				
6	79	68	61	56	78	67	60	55	66	60	55	64	59	54	63	58	54	52				
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				
8	70	58	51	46	69	58	51	46	57	50	46	56	50	46	54	49	45	44				
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				
10	62	51	44	39	61	50	44	39	50	43	39	49	43	39	48	43	39	37				

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

	0°	45°	90°
0°	9147	9147	9147
5°	8833	8981	9128
10°	8231	8556	8990
15°	7493	8004	8750
20°	6708	7346	8356
25°	5850	6557	7897
30°	4919	5752	7432
35°	3912	4874	6994
40°	2790	3975	6536
45°	1662	3192	5854
50°	1226	2431	5069
55°	1024	1652	4027
60°	829	1362	2830
65°	664	1170	1517
70°	546	1016	937
75°	517	980	876
80°	541	1075	845
85°	768	1536	1078

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5854 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.6	6.9
10°-20°	185.9	17.8
20°-30°	237.1	22.7
30°-40°	223.1	21.4
40°-50°	160.3	15.4
50°-60°	91.9	8.8
60°-70°	42.0	4.0
70°-80°	21.1	2.0
80°-90°	10.3	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°	494.6	47.4
0°-40°	717.6	68.8
0°-60°	969.8	93.0
0°-90°	1043.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1043.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	779	779	779	779	779	
5°	749	764	762	768	774	70
15°	616	638	658	694	720	172
25°	452	472	506	561	610	206
35°	273	292	340	417	488	169
45°	100	122	192	283	352	84
55°	50	51	81	149	197	45
65°	24	33	42	47	55	24
75°	11	23	22	19	19	12
85°	6	11	11	10	8	6
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	779.0	779.0	779.0	779.0	779.0
2.5°	768.7	780.1	773.3	773.3	774.4
5°	749.4	764.2	761.9	767.6	774.4
7.5°	722.1	738.0	742.6	756.2	767.6
10°	690.3	708.5	717.6	739.2	754.0
12.5°	655.0	675.5	690.3	717.6	739.2
15°	616.4	638.0	658.4	693.7	719.8
17.5°	576.6	598.2	624.3	665.3	696.0
20°	536.8	558.4	587.9	631.1	668.7
22.5°	493.5	515.2	547.0	595.9	641.4
25°	451.5	471.9	506.1	560.6	609.5
27.5°	407.1	427.6	465.1	524.2	578.8
30°	362.8	383.2	424.2	487.9	548.1
32.5°	318.4	337.7	382.1	452.6	517.4
35°	272.9	292.3	340.0	417.4	487.9
37.5°	226.3	245.6	301.4	385.5	458.3
40°	182.0	203.6	259.3	353.7	426.4
42.5°	138.7	161.5	225.2	319.6	390.1
45°	100.1	121.7	192.2	283.2	352.5
47.5°	76.2	87.6	162.6	246.8	316.1
50°	67.1	68.2	133.1	213.8	277.5
52.5°	58.0	59.1	103.5	182.0	236.5
55°	50.0	51.2	80.7	149.0	196.7
57.5°	42.1	44.4	66.0	118.3	158.1
60°	35.3	39.8	58.0	89.8	120.5
62.5°	28.4	36.4	50.0	66.0	86.4
65°	23.9	33.0	42.1	46.6	54.6
67.5°	19.3	30.7	35.3	33.0	33.0
70°	15.9	27.3	29.6	27.3	27.3
72.5°	13.6	26.2	25.0	22.7	22.7
75°	11.4	22.7	21.6	19.3	19.3
77.5°	10.2	19.3	18.2	17.1	15.9
80°	8.0	15.9	15.9	14.8	12.5
82.5°	6.8	13.6	13.6	12.5	10.2
85°	5.7	11.4	11.4	10.2	8.0
87.5°	4.5	10.2	10.2	9.1	5.7
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	7.68	9.00	8.05	9.31	9.63	14.90	16.22	15.26	16.53	16.84
	3H	9.08	10.25	9.46	10.58	10.94	15.14	16.30	15.52	16.63	17.00
	4H	9.64	10.73	10.04	11.08	11.46	15.24	16.33	15.64	16.68	17.07
	6H	10.10	11.10	10.51	11.47	11.86	15.35	16.35	15.76	16.72	17.11
	8H	10.28	11.23	10.71	11.62	12.03	15.40	16.35	15.83	16.74	17.14
	12H	10.47	11.38	10.91	11.76	12.19	15.45	16.35	15.88	16.74	17.17
4H	2H	8.75	9.84	9.16	10.19	10.58	14.86	15.95	15.26	16.30	16.68
	3H	10.44	11.33	10.85	11.74	12.14	15.23	16.12	15.64	16.53	16.93
	4H	11.27	12.07	11.71	12.49	12.93	15.41	16.21	15.85	16.63	17.07
	6H	11.93	12.62	12.39	13.07	13.53	15.63	16.33	16.10	16.77	17.24
	8H	12.18	12.83	12.65	13.28	13.75	15.73	16.38	16.20	16.83	17.30
	12H	12.44	13.01	12.92	13.49	13.97	15.85	16.42	16.34	16.91	17.38
8H	4H	11.71	12.35	12.18	12.80	13.27	15.46	16.10	15.93	16.55	17.02
	6H	12.66	13.19	13.16	13.68	14.16	15.79	16.32	16.29	16.82	17.30
	8H	13.12	13.60	13.64	14.11	14.60	15.98	16.46	16.50	16.97	17.46
	12H	13.60	14.02	14.11	14.52	15.09	16.21	16.63	16.73	17.13	17.70
12H	4H	11.77	12.34	12.25	12.82	13.30	15.45	16.02	15.94	16.50	16.98
	6H	12.80	13.28	13.33	13.80	14.29	15.82	16.29	16.34	16.81	17.30
	8H	13.39	13.82	13.91	14.31	14.88	16.07	16.50	16.59	16.99	17.56