

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: P1059500

Luminaire Tested: S123RDR-H1165D835-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059500  
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: S123RDR-H1165D835-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: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

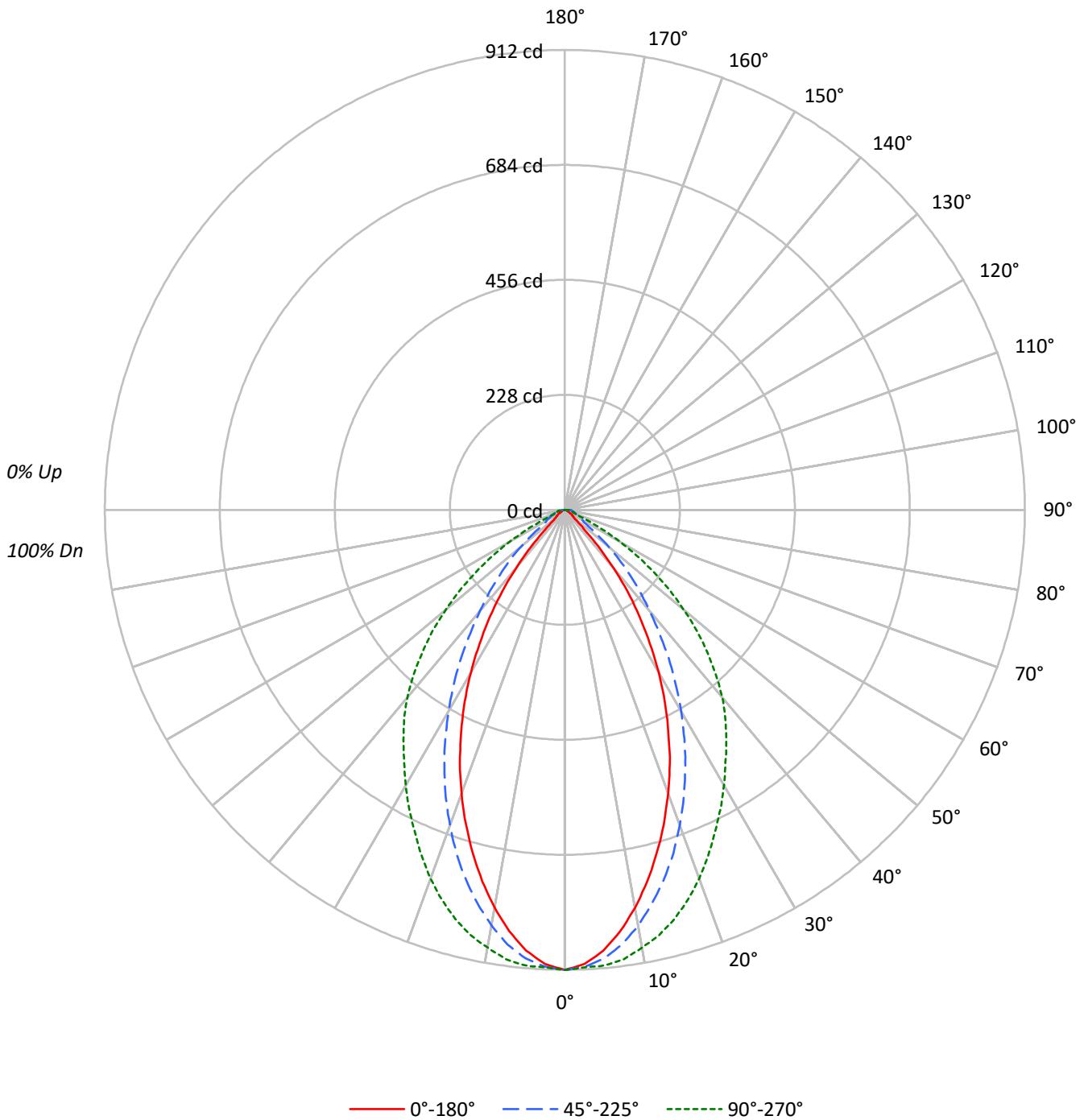
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1096.0 lumens  
Efficiency: N/A  
Efficacy: 30.0 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): 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	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°	10714	10714	10714
5°	10343	10525	10689
10°	9548	9981	10513
15°	8564	9226	10210
20°	7479	8316	9728
25°	6290	7320	9128
30°	5051	6243	8550
35°	3700	5139	7999
40°	2289	3999	7442
45°	880	3012	6626
50°	433	2064	5606
55°	342	1142	4397
60°	230	951	2950
65°	194	853	1317
70°	192	766	766
75°	254	821	758
80°	379	1035	852
85°	566	1698	1132

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6626 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.7	7.6
10°-20°	214.2	19.5
20°-30°	265.8	24.3
30°-40°	238.1	21.7
40°-50°	156.5	14.3
50°-60°	78.4	7.2
60°-70°	31.0	2.8
70°-80°	17.3	1.6
80°-90°	10.9	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°	563.6	51.4
0°-40°	801.8	73.2
0°-60°	1036.7	94.6
0°-90°	1096.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1096.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	878	892	893	898	907	81
15°	704	727	759	811	840	196
25°	486	516	565	644	704	222
35°	258	293	358	469	558	160
45°	53	88	181	306	399	50
55°	17	20	56	151	215	15
65°	7	20	31	39	47	7
75°	6	18	18	17	17	6
85°	4	13	13	13	8	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	912.4	912.4	912.4	912.4	912.4
2.5°	901.2	913.8	906.8	906.8	908.2
5°	877.5	891.5	892.9	898.4	906.8
7.5°	842.6	860.8	869.2	885.9	898.4
10°	800.8	820.3	837.1	866.4	881.7
12.5°	754.8	774.3	799.4	839.9	863.6
15°	704.5	726.8	758.9	810.6	839.9
17.5°	652.9	675.2	714.3	772.9	810.6
20°	598.5	623.6	665.5	732.4	778.5
22.5°	544.1	572.0	616.6	689.2	742.2
25°	485.5	516.2	565.0	644.5	704.5
27.5°	429.7	461.8	513.4	599.9	668.3
30°	372.5	404.6	460.4	553.9	630.6
32.5°	313.9	350.2	408.8	510.6	592.9
35°	258.1	293.0	358.5	468.8	558.0
37.5°	203.7	238.6	306.9	428.3	523.2
40°	149.3	185.5	260.9	389.2	485.5
42.5°	97.7	135.3	220.4	350.2	443.6
45°	53.0	87.9	181.4	305.5	399.0
47.5°	29.3	47.4	146.5	263.7	355.8
50°	23.7	26.5	113.0	224.6	306.9
52.5°	19.5	22.3	80.9	186.9	262.3
55°	16.7	19.5	55.8	150.7	214.8
57.5°	14.0	16.7	44.6	115.8	168.8
60°	9.8	16.7	40.5	85.1	125.6
62.5°	8.4	16.7	34.9	58.6	83.7
65°	7.0	19.5	30.7	39.1	47.4
67.5°	5.6	19.5	26.5	25.1	25.1
70°	5.6	19.5	22.3	20.9	22.3
72.5°	5.6	20.9	20.9	19.5	19.5
75°	5.6	18.1	18.1	16.7	16.7
77.5°	5.6	16.7	16.7	15.3	15.3
80°	5.6	15.3	15.3	14.0	12.6
82.5°	5.6	14.0	14.0	12.6	11.2
85°	4.2	12.6	12.6	12.6	8.4
87.5°	4.2	11.2	12.6	11.2	7.0
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	0.69	1.94	1.05	2.26	2.57	14.79	16.04	15.15	16.36	16.67
	3H	3.21	4.33	3.60	4.66	5.02	14.86	15.98	15.25	16.31	16.67
	4H	4.38	5.42	4.79	5.77	6.15	14.93	15.96	15.33	16.31	16.70
	6H	5.44	6.39	5.85	6.76	7.15	15.03	15.98	15.44	16.35	16.74
	8H	5.98	6.88	6.41	7.27	7.68	15.09	15.99	15.52	16.38	16.78
	12H	6.46	7.32	6.90	7.71	8.14	15.16	16.02	15.59	16.40	16.83
4H	2H	3.96	4.99	4.36	5.34	5.73	14.65	15.68	15.05	16.03	16.42
	3H	6.42	7.26	6.83	7.67	8.07	14.82	15.67	15.23	16.07	16.47
	4H	7.76	8.52	8.20	8.94	9.38	14.95	15.70	15.38	16.12	16.57
	6H	8.89	9.54	9.36	9.99	10.46	15.16	15.82	15.63	16.26	16.73
	8H	9.40	10.02	9.87	10.46	10.94	15.29	15.90	15.76	16.35	16.82
	12H	9.86	10.40	10.35	10.89	11.36	15.45	15.99	15.94	16.47	16.95
8H	4H	8.67	9.28	9.14	9.73	10.20	14.95	15.56	15.42	16.01	16.48
	6H	10.27	10.77	10.78	11.27	11.75	15.28	15.78	15.78	16.28	16.76
	8H	11.11	11.56	11.63	12.07	12.57	15.51	15.96	16.03	16.48	16.97
	12H	11.89	12.29	12.41	12.79	13.36	15.84	16.24	16.35	16.73	17.31
12H	4H	8.84	9.38	9.33	9.87	10.34	14.94	15.48	15.43	15.96	16.44
	6H	10.59	11.04	11.11	11.56	12.05	15.31	15.76	15.83	16.28	16.77
	8H	11.61	12.01	12.12	12.50	13.07	15.62	16.02	16.14	16.52	17.09