

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: P1059482

Luminaire Tested: S123RDR-H1000D950-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059482  
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-H1000D950-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: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

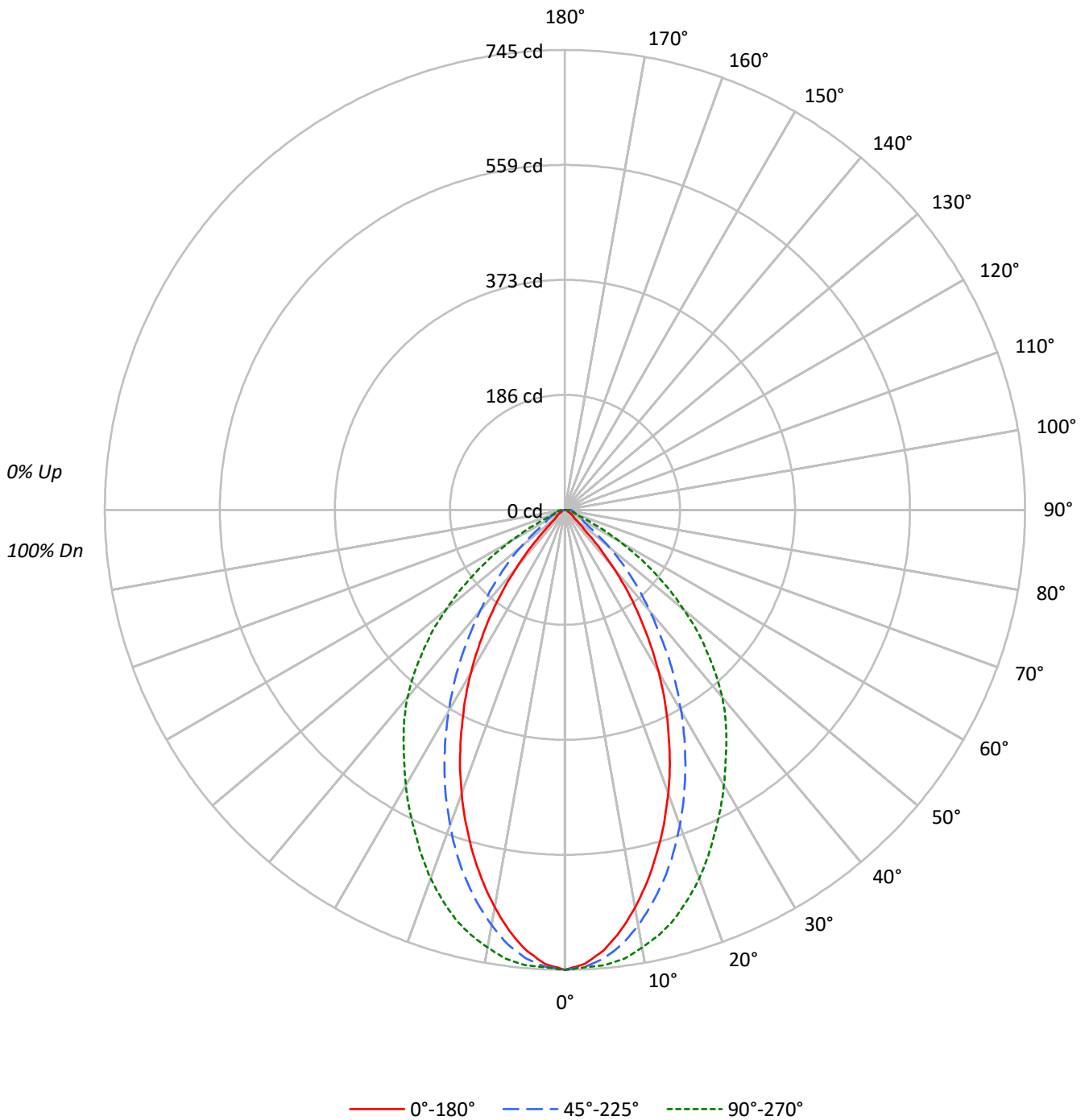
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 895.1 lumens  
Efficiency: N/A  
Efficacy: 28.7 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): 31.2  
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°	8749	8749	8749
5°	8447	8595	8730
10°	7798	8151	8585
15°	6995	7535	8338
20°	6108	6792	7944
25°	5137	5978	7455
30°	4125	5098	6983
35°	3022	4197	6532
40°	1869	3267	6078
45°	719	2459	5410
50°	354	1686	4578
55°	280	934	3593
60°	188	775	2407
65°	158	697	1075
70°	158	625	625
75°	209	671	622
80°	311	845	697
85°	458	1388	916

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5410 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.3	7.6
10°-20°	174.9	19.5
20°-30°	217.1	24.3
30°-40°	194.5	21.7
40°-50°	127.8	14.3
50°-60°	64.1	7.2
60°-70°	25.3	2.8
70°-80°	14.2	1.6
80°-90°	8.9	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°	460.3	51.4
0°-40°	654.8	73.2
0°-60°	846.7	94.6
0°-90°	895.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	895.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	745	745	745	745	745	
5°	717	728	729	734	741	66
15°	575	594	620	662	686	160
25°	396	422	461	526	575	181
35°	211	239	293	383	456	131
45°	43	72	148	250	326	41
55°	14	16	46	123	176	12
65°	6	16	25	32	39	6
75°	5	15	15	14	14	5
85°	3	10	10	10	7	4
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	745.1	745.1	745.1	745.1	745.1
2.5°	736.0	746.3	740.6	740.6	741.7
5°	716.6	728.0	729.2	733.7	740.6
7.5°	688.1	703.0	709.8	723.5	733.7
10°	654.0	669.9	683.6	707.5	720.0
12.5°	616.4	632.3	652.8	685.9	705.2
15°	575.4	593.6	619.8	661.9	685.9
17.5°	533.2	551.4	583.3	631.2	661.9
20°	488.8	509.3	543.5	598.1	635.7
22.5°	444.3	467.1	503.6	562.8	606.1
25°	396.5	421.5	461.4	526.4	575.4
27.5°	350.9	377.1	419.3	489.9	545.7
30°	304.2	330.4	376.0	452.3	515.0
32.5°	256.3	286.0	333.8	417.0	484.2
35°	210.8	239.3	292.8	382.8	455.7
37.5°	166.3	194.8	250.6	349.8	427.2
40°	121.9	151.5	213.1	317.9	396.5
42.5°	79.8	110.5	180.0	286.0	362.3
45°	43.3	71.8	148.1	249.5	325.8
47.5°	23.9	38.7	119.6	215.3	290.5
50°	19.4	21.6	92.3	183.4	250.6
52.5°	16.0	18.2	66.1	152.7	214.2
55°	13.7	16.0	45.6	123.0	175.5
57.5°	11.4	13.7	36.5	94.6	137.9
60°	8.0	13.7	33.0	69.5	102.5
62.5°	6.8	13.7	28.5	47.9	68.4
65°	5.7	16.0	25.1	31.9	38.7
67.5°	4.6	16.0	21.6	20.5	20.5
70°	4.6	16.0	18.2	17.1	18.2
72.5°	4.6	17.1	17.1	16.0	16.0
75°	4.6	14.8	14.8	13.7	13.7
77.5°	4.6	13.7	13.7	12.5	12.5
80°	4.6	12.5	12.5	11.4	10.3
82.5°	4.6	11.4	11.4	10.3	9.1
85°	3.4	10.3	10.3	10.3	6.8
87.5°	3.4	9.1	10.3	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	0.01	1.26	0.37	1.58	1.89	14.08	15.34	14.45	15.65	15.97
	3H	2.54	3.65	2.92	3.98	4.35	14.16	15.28	14.54	15.61	15.97
	4H	3.71	4.74	4.11	5.09	5.48	14.23	15.26	14.63	15.61	16.00
	6H	4.76	5.71	5.18	6.08	6.48	14.32	15.28	14.74	15.65	16.04
	8H	5.30	6.20	5.73	6.59	7.00	14.38	15.28	14.82	15.68	16.08
	12H	5.78	6.64	6.21	7.02	7.45	14.45	15.31	14.89	15.70	16.13
4H	2H	3.27	4.30	3.67	4.65	5.04	13.94	14.98	14.35	15.33	15.72
	3H	5.73	6.58	6.14	6.98	7.39	14.12	14.96	14.53	15.37	15.77
	4H	7.07	7.83	7.51	8.25	8.69	14.25	15.00	14.68	15.42	15.87
	6H	8.21	8.86	8.67	9.31	9.77	14.46	15.12	14.93	15.56	16.03
	8H	8.72	9.33	9.19	9.78	10.25	14.59	15.20	15.06	15.65	16.12
	12H	9.17	9.71	9.66	10.20	10.67	14.75	15.29	15.23	15.77	16.24
8H	4H	7.99	8.60	8.46	9.05	9.52	14.25	14.86	14.72	15.31	15.78
	6H	9.58	10.08	10.09	10.58	11.06	14.58	15.08	15.08	15.58	16.06
	8H	10.41	10.86	10.94	11.38	11.87	14.81	15.26	15.33	15.78	16.27
	12H	11.19	11.59	11.71	12.09	12.66	15.13	15.53	15.65	16.03	16.60
12H	4H	8.15	8.69	8.64	9.18	9.65	14.24	14.78	14.73	15.26	15.74
	6H	9.90	10.35	10.42	10.87	11.36	14.61	15.06	15.13	15.58	16.07
	8H	10.91	11.31	11.43	11.80	12.38	14.92	15.32	15.44	15.82	16.39