

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: P1059412

Luminaire Tested: S123RDR-H1000D830-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059412  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H1000D830-X4F0-XX-UDD-SVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

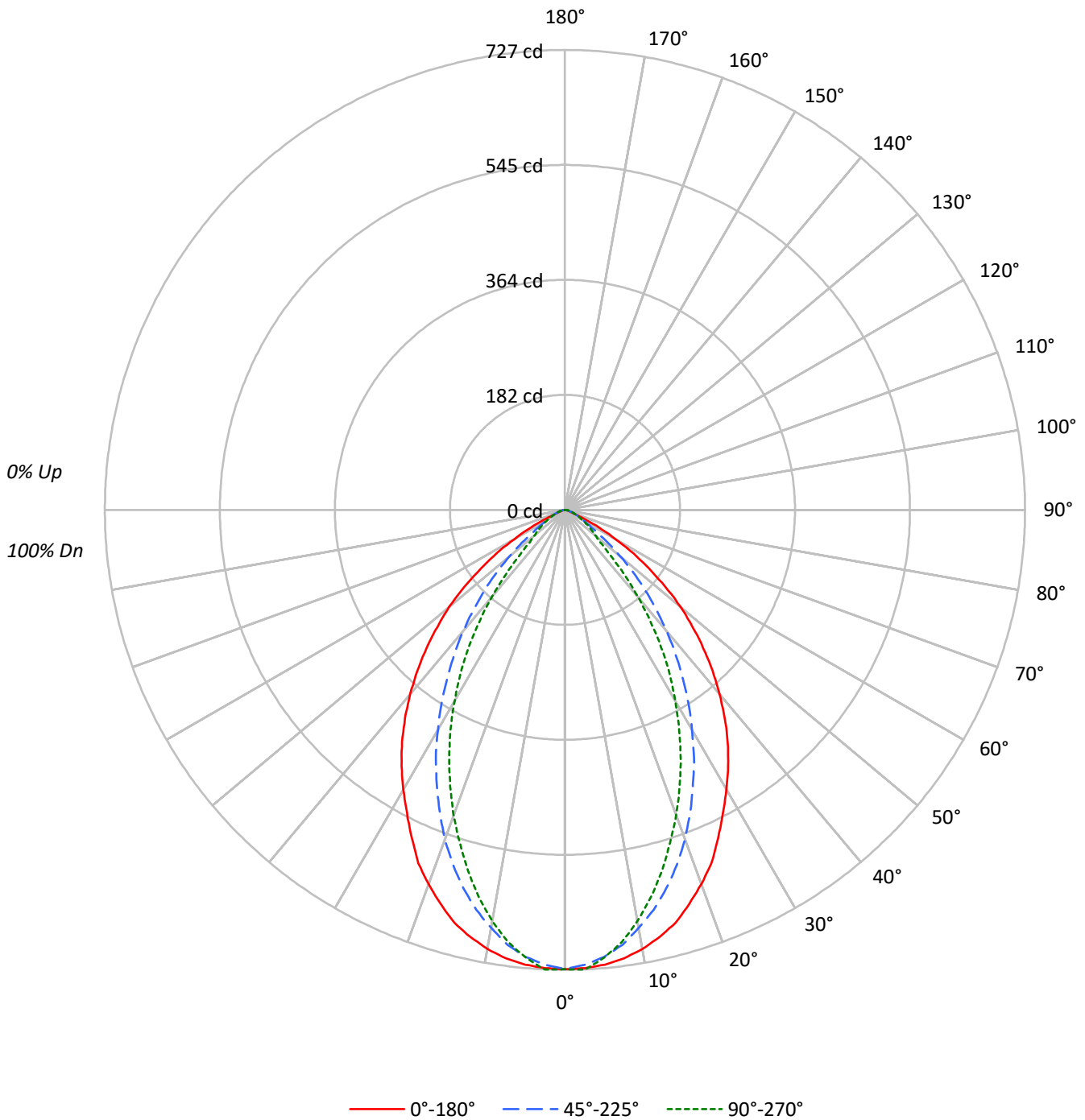
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 937.5 lumens  
Efficiency: N/A  
Efficacy: 30.0 lumens/watt  
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98  
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	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	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73				73
4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				46
9	67	56	49	45	66	56	49	44	55	49	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39				39

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

	0°	45°	90°
0°	8527	8527	8527
5°	8507	8362	8375
10°	8405	8003	7868
15°	8214	7530	7188
20°	7868	6925	6420
25°	7414	6205	5608
30°	6921	5441	4725
35°	6431	4642	3803
40°	5825	3826	2758
45°	5135	2968	1662
50°	4353	2073	1129
55°	3314	1243	944
60°	2165	791	740
65°	906	595	595
70°	309	426	463
75°	254	304	358
80°	149	230	304
85°	148	148	296

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5135 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.1	7.2
10°-20°	175.5	18.7
20°-30°	225.1	24.0
30°-40°	211.2	22.5
40°-50°	147.4	15.7
50°-60°	76.2	8.1
60°-70°	26.1	2.8
70°-80°	7.4	0.8
80°-90°	1.6	0.2
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°	467.7	49.9
0°-40°	678.9	72.4
0°-60°	902.5	96.3
0°-90°	937.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	937.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	726	726	726	726	726	
5°	722	721	709	713	710	68
15°	676	659	619	599	591	189
25°	572	536	479	446	433	263
35°	449	394	324	282	265	279
45°	309	253	179	124	100	238
55°	162	121	61	47	46	146
65°	33	28	21	20	21	39
75°	6	6	7	8	8	6
85°	1	1	1	1	2	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	726.2	726.2	726.2	726.2	726.2
2.5°	725.1	726.2	719.5	726.2	727.4
5°	721.7	720.6	709.4	712.8	710.5
7.5°	715.0	711.6	693.6	689.1	689.1
10°	704.9	698.1	671.2	663.3	659.9
12.5°	691.4	682.4	647.5	632.9	627.3
15°	675.7	658.8	619.4	599.2	591.3
17.5°	653.2	630.7	588.0	564.4	552.0
20°	629.6	601.5	554.2	526.1	513.8
22.5°	604.8	571.1	517.1	486.8	473.3
25°	572.2	536.2	478.9	446.3	432.8
27.5°	540.7	502.5	441.8	404.7	391.2
30°	510.4	465.4	401.3	365.4	348.5
32.5°	480.0	429.4	363.1	323.8	308.0
35°	448.6	393.5	323.8	282.2	265.3
37.5°	414.8	358.6	286.7	241.7	221.5
40°	380.0	321.5	249.6	199.0	179.9
42.5°	345.1	287.8	212.5	160.8	138.3
45°	309.2	252.9	178.7	123.7	100.1
47.5°	273.2	218.1	146.1	89.9	75.3
50°	238.3	185.5	113.5	66.3	61.8
52.5°	200.1	154.0	85.4	55.1	54.0
55°	161.9	121.4	60.7	47.2	46.1
57.5°	128.2	94.4	43.8	39.3	38.2
60°	92.2	67.5	33.7	32.6	31.5
62.5°	60.7	46.1	27.0	25.9	25.9
65°	32.6	28.1	21.4	20.2	21.4
67.5°	13.5	15.7	15.7	16.9	16.9
70°	9.0	10.1	12.4	13.5	13.5
72.5°	6.7	7.9	9.0	10.1	10.1
75°	5.6	5.6	6.7	7.9	7.9
77.5°	3.4	4.5	4.5	5.6	6.7
80°	2.2	3.4	3.4	4.5	4.5
82.5°	1.1	2.2	2.2	3.4	3.4
85°	1.1	1.1	1.1	1.1	2.2
87.5°	0.0	0.0	0.0	0.0	1.1
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	13.78	15.04	14.14	15.35	15.67	7.28	8.54	7.64	8.85	9.17
	3H	13.73	14.84	14.11	15.17	15.54	8.06	9.17	8.44	9.50	9.86
	4H	13.68	14.71	14.08	15.06	15.44	8.26	9.29	8.66	9.64	10.03
	6H	13.61	14.55	14.02	14.92	15.32	8.40	9.35	8.82	9.72	10.11
	8H	13.57	14.46	14.00	14.85	15.25	8.44	9.33	8.87	9.72	10.13
	12H	13.52	14.37	13.96	14.76	15.19	8.46	9.31	8.89	9.69	10.12
4H	2H	13.63	14.65	14.03	15.01	15.39	7.54	8.57	7.94	8.92	9.30
	3H	13.61	14.45	14.02	14.85	15.25	8.45	9.28	8.86	9.69	10.09
	4H	13.56	14.30	13.99	14.72	15.17	8.72	9.47	9.16	9.89	10.33
	6H	13.50	14.14	13.97	14.59	15.06	8.94	9.57	9.40	10.02	10.49
	8H	13.45	14.04	13.92	14.49	14.96	9.00	9.59	9.47	10.04	10.52
	12H	13.40	13.93	13.89	14.41	14.89	9.04	9.56	9.52	10.04	10.52
8H	4H	13.45	14.04	13.92	14.49	14.96	8.71	9.30	9.18	9.75	10.22
	6H	13.38	13.87	13.89	14.36	14.85	8.97	9.46	9.48	9.96	10.44
	8H	13.33	13.77	13.86	14.28	14.78	9.08	9.52	9.61	10.03	10.53
	12H	13.29	13.68	13.81	14.17	14.75	9.15	9.54	9.67	10.03	10.61
12H	4H	13.40	13.92	13.89	14.41	14.88	8.67	9.19	9.16	9.68	10.15
	6H	13.32	13.76	13.85	14.28	14.77	8.93	9.37	9.46	9.89	10.38
	8H	13.29	13.68	13.81	14.17	14.75	9.08	9.46	9.59	9.96	10.53