

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: P1059493

Luminaire Tested: S123RDR-H1165D830-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059493  
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-H1165D830-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: -

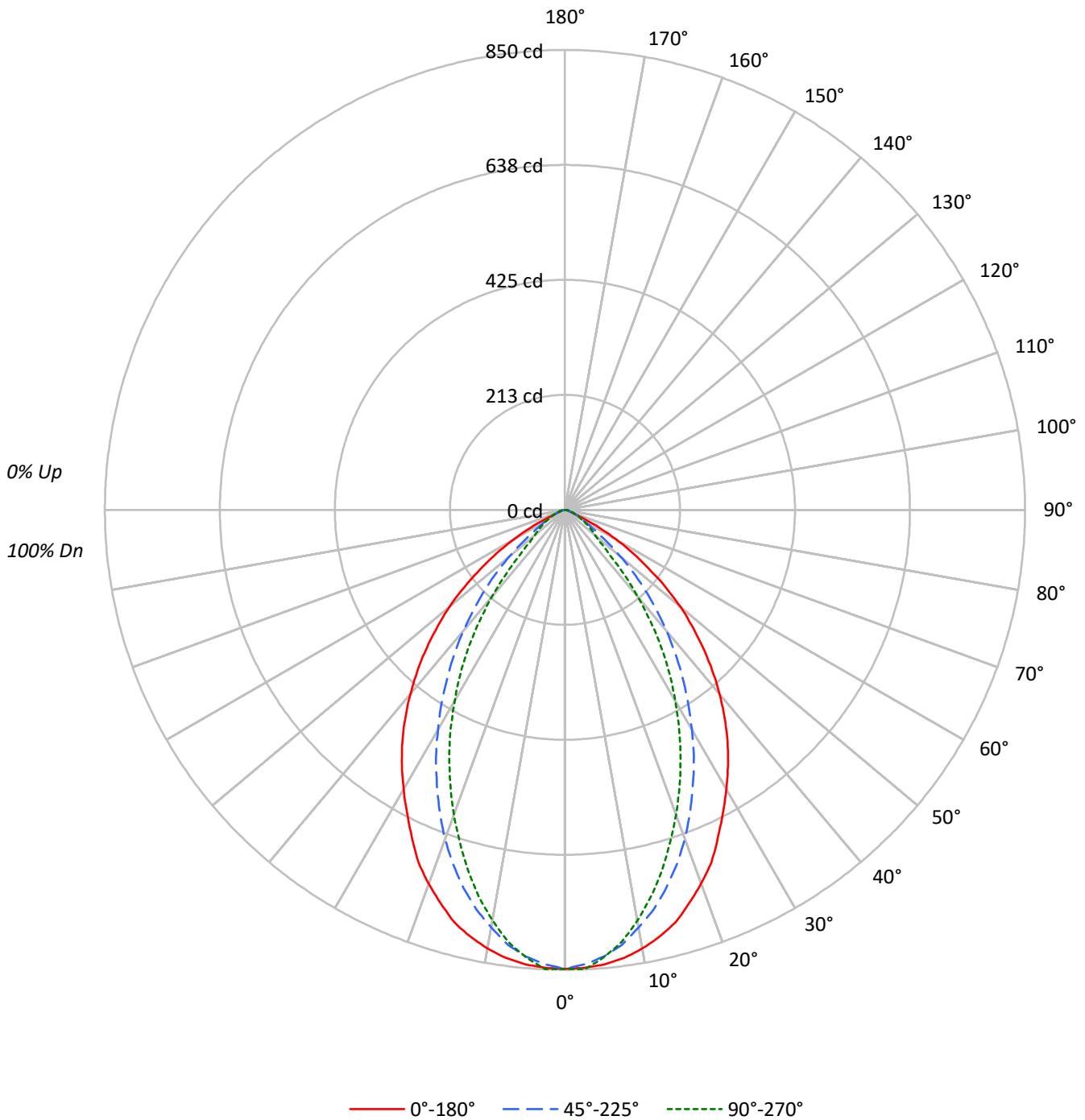
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1095.2 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): 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				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	70	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	48	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°	9962	9962	9962
5°	9938	9768	9783
10°	9818	9348	9192
15°	9595	8797	8398
20°	9190	8091	7500
25°	8661	7249	6551
30°	8084	6356	5520
35°	7511	5421	4442
40°	6804	4468	3221
45°	5998	3467	1941
50°	5086	2422	1319
55°	3871	1451	1101
60°	2529	925	864
65°	1059	695	695
70°	360	494	542
75°	299	358	417
80°	176	264	358
85°	175	175	350

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5998 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.3	7.2
10°-20°	205.1	18.7
20°-30°	263.0	24.0
30°-40°	246.8	22.5
40°-50°	172.1	15.7
50°-60°	89.0	8.1
60°-70°	30.4	2.8
70°-80°	8.7	0.8
80°-90°	1.8	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°	546.4	49.9
0°-40°	793.1	72.4
0°-60°	1054.3	96.3
0°-90°	1095.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1095.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	843	842	829	833	830	80
15°	789	770	724	700	691	221
25°	668	626	560	521	506	307
35°	524	460	378	330	310	326
45°	361	296	209	144	117	278
55°	189	142	71	55	54	170
65°	38	33	25	24	25	45
75°	7	7	8	9	9	7
85°	1	1	1	1	3	1
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	848.4	848.4	848.4	848.4	848.4
2.5°	847.1	848.4	840.5	848.4	849.7
5°	843.1	841.8	828.7	832.6	830.0
7.5°	835.3	831.3	810.3	805.0	805.0
10°	823.4	815.6	784.0	774.8	770.9
12.5°	807.7	797.2	756.5	739.4	732.8
15°	789.3	769.6	723.6	700.0	690.8
17.5°	763.0	736.8	686.8	659.3	644.8
20°	735.4	702.6	647.5	614.6	600.2
22.5°	706.5	667.2	604.1	568.7	552.9
25°	668.5	626.4	559.5	521.4	505.6
27.5°	631.7	587.0	516.1	472.8	457.0
30°	596.2	543.7	468.8	426.8	407.1
32.5°	560.8	501.7	424.2	378.2	359.8
35°	524.0	459.7	378.2	329.6	309.9
37.5°	484.6	418.9	334.9	282.4	258.7
40°	443.9	375.6	291.5	232.5	210.1
42.5°	403.2	336.2	248.2	187.8	161.5
45°	361.2	295.5	208.8	144.5	116.9
47.5°	319.1	254.8	170.7	105.1	88.0
50°	278.4	216.7	132.6	77.5	72.2
52.5°	233.8	179.9	99.8	64.4	63.0
55°	189.1	141.8	70.9	55.2	53.8
57.5°	149.7	110.3	51.2	46.0	44.7
60°	107.7	78.8	39.4	38.1	36.8
62.5°	70.9	53.8	31.5	30.2	30.2
65°	38.1	32.8	25.0	23.6	25.0
67.5°	15.8	18.4	18.4	19.7	19.7
70°	10.5	11.8	14.4	15.8	15.8
72.5°	7.9	9.2	10.5	11.8	11.8
75°	6.6	6.6	7.9	9.2	9.2
77.5°	3.9	5.3	5.3	6.6	7.9
80°	2.6	3.9	3.9	5.3	5.3
82.5°	1.3	2.6	2.6	3.9	3.9
85°	1.3	1.3	1.3	1.3	2.6
87.5°	0.0	0.0	0.0	0.0	1.3
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	14.32	15.58	14.68	15.89	16.21	7.83	9.09	8.20	9.40	9.72
	3H	14.27	15.38	14.65	15.71	16.08	8.61	9.71	8.99	10.05	10.41
	4H	14.22	15.25	14.62	15.60	15.99	8.81	9.84	9.21	10.19	10.57
	6H	14.15	15.09	14.56	15.46	15.86	8.95	9.90	9.37	10.27	10.66
	8H	14.11	15.00	14.54	15.39	15.79	8.99	9.88	9.42	10.27	10.68
	12H	14.06	14.91	14.50	15.30	15.73	9.00	9.86	9.44	10.24	10.67
4H	2H	14.17	15.19	14.57	15.55	15.93	8.09	9.12	8.49	9.47	9.85
	3H	14.15	14.99	14.56	15.39	15.79	9.00	9.83	9.41	10.23	10.64
	4H	14.10	14.84	14.54	15.26	15.71	9.27	10.01	9.70	10.43	10.88
	6H	14.04	14.68	14.51	15.13	15.60	9.49	10.12	9.95	10.57	11.04
	8H	13.99	14.58	14.46	15.03	15.50	9.55	10.14	10.02	10.59	11.06
	12H	13.94	14.47	14.43	14.95	15.43	9.58	10.11	10.07	10.59	11.07
8H	4H	13.99	14.58	14.46	15.03	15.50	9.25	9.85	9.72	10.29	10.77
	6H	13.92	14.41	14.43	14.91	15.39	9.52	10.01	10.03	10.51	10.99
	8H	13.87	14.31	14.40	14.82	15.32	9.63	10.06	10.15	10.58	11.07
	12H	13.83	14.22	14.35	14.71	15.29	9.70	10.08	10.22	10.58	11.15
12H	4H	13.94	14.46	14.43	14.95	15.42	9.21	9.74	9.70	10.22	10.70
	6H	13.87	14.30	14.39	14.82	15.31	9.48	9.92	10.01	10.44	10.93
	8H	13.84	14.22	14.35	14.72	15.29	9.62	10.01	10.14	10.50	11.07