

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: P1059806

Luminaire Tested: S123RDR-H775D950-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059806  
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-H775D950-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: -

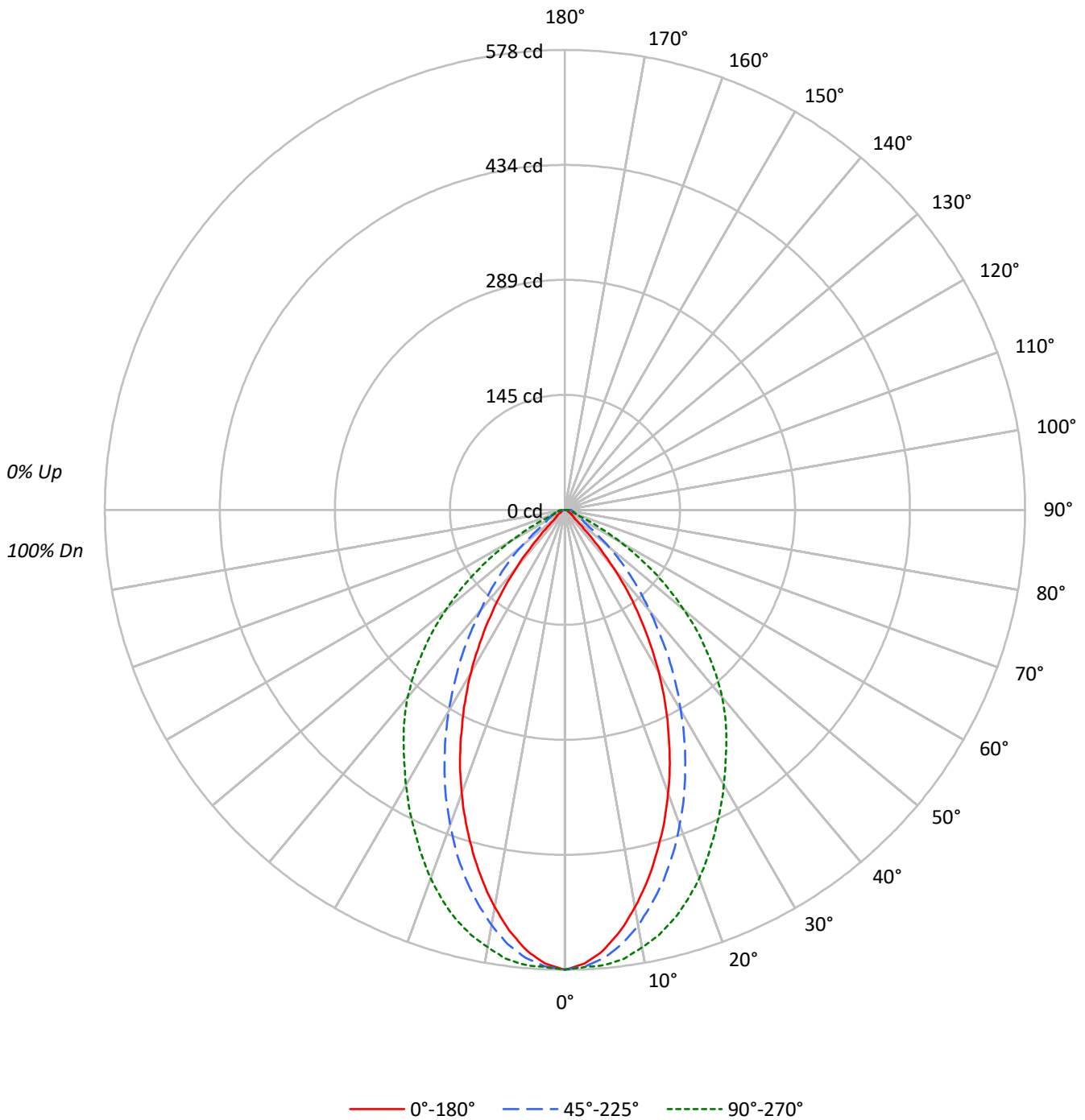
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 694.0 lumens  
Efficiency: N/A  
Efficacy: 29.5 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): 23.5  
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	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°	6785	6785	6785
5°	6550	6665	6768
10°	6046	6321	6657
15°	5423	5842	6465
20°	4736	5266	6161
25°	3983	4636	5780
30°	3199	3952	5414
35°	2342	3254	5066
40°	1449	2532	4712
45°	558	1906	4196
50°	274	1308	3551
55°	217	723	2784
60°	146	601	1867
65°	122	539	834
70°	120	484	484
75°	159	522	481
80°	237	656	541
85°	364	1078	714

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4196 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.0	7.6
10°-20°	135.6	19.5
20°-30°	168.3	24.3
30°-40°	150.8	21.7
40°-50°	99.1	14.3
50°-60°	49.7	7.2
60°-70°	19.6	2.8
70°-80°	11.0	1.6
80°-90°	6.9	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°	356.9	51.4
0°-40°	507.7	73.2
0°-60°	656.5	94.6
0°-90°	694.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	694.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	578	578	578	578	578	
5°	556	564	565	569	574	51
15°	446	460	481	513	532	124
25°	307	327	358	408	446	141
35°	163	186	227	297	353	101
45°	34	56	115	194	253	32
55°	11	12	35	95	136	9
65°	4	12	19	25	30	4
75°	4	12	12	11	11	4
85°	3	8	8	8	5	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	577.8	577.8	577.8	577.8	577.8
2.5°	570.7	578.7	574.2	574.2	575.1
5°	555.7	564.5	565.4	568.9	574.2
7.5°	533.6	545.1	550.4	561.0	568.9
10°	507.1	519.5	530.1	548.6	558.3
12.5°	477.9	490.3	506.2	531.8	546.8
15°	446.1	460.3	480.6	513.3	531.8
17.5°	413.4	427.6	452.3	489.4	513.3
20°	379.0	394.9	421.4	463.8	493.0
22.5°	344.5	362.2	390.5	436.4	470.0
25°	307.4	326.9	357.8	408.1	446.1
27.5°	272.1	292.4	325.1	379.9	423.2
30°	235.9	256.2	291.5	350.7	399.3
32.5°	198.8	221.7	258.8	323.3	375.5
35°	163.4	185.5	227.0	296.8	353.4
37.5°	129.0	151.1	194.4	271.2	331.3
40°	94.5	117.5	165.2	246.5	307.4
42.5°	61.8	85.7	139.6	221.7	280.9
45°	33.6	55.7	114.8	193.5	252.7
47.5°	18.6	30.0	92.8	167.0	225.3
50°	15.0	16.8	71.6	142.2	194.4
52.5°	12.4	14.1	51.2	118.4	166.1
55°	10.6	12.4	35.3	95.4	136.0
57.5°	8.8	10.6	28.3	73.3	106.9
60°	6.2	10.6	25.6	53.9	79.5
62.5°	5.3	10.6	22.1	37.1	53.0
65°	4.4	12.4	19.4	24.7	30.0
67.5°	3.5	12.4	16.8	15.9	15.9
70°	3.5	12.4	14.1	13.3	14.1
72.5°	3.5	13.3	13.3	12.4	12.4
75°	3.5	11.5	11.5	10.6	10.6
77.5°	3.5	10.6	10.6	9.7	9.7
80°	3.5	9.7	9.7	8.8	8.0
82.5°	3.5	8.8	8.8	8.0	7.1
85°	2.7	8.0	8.0	8.0	5.3
87.5°	2.7	7.1	8.0	7.1	4.4
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	0.00	0.36	0.00	0.68	0.99	13.20	14.45	13.56	14.77	15.08
	3H	1.63	2.74	2.01	3.07	3.44	13.28	14.39	13.66	14.72	15.08
	4H	2.80	3.83	3.20	4.18	4.57	13.34	14.37	13.74	14.73	15.11
	6H	3.84	4.79	4.25	5.16	5.55	13.44	14.39	13.85	14.76	15.15
	8H	4.37	5.27	4.80	5.66	6.07	13.50	14.40	13.93	14.79	15.20
	12H	4.86	5.72	5.29	6.10	6.53	13.57	14.43	14.00	14.81	15.24
4H	2H	2.36	3.40	2.77	3.75	4.13	13.06	14.09	13.46	14.44	14.83
	3H	4.83	5.68	5.25	6.08	6.49	13.23	14.08	13.64	14.48	14.89
	4H	6.18	6.94	6.61	7.36	7.80	13.36	14.12	13.79	14.54	14.98
	6H	7.31	7.96	7.77	8.41	8.87	13.57	14.23	14.04	14.68	15.14
	8H	7.81	8.42	8.28	8.87	9.34	13.70	14.31	14.17	14.76	15.23
	12H	8.27	8.81	8.76	9.30	9.77	13.86	14.40	14.35	14.89	15.36
8H	4H	7.10	7.71	7.57	8.16	8.63	13.36	13.97	13.83	14.42	14.89
	6H	8.69	9.19	9.19	9.69	10.17	13.69	14.19	14.20	14.69	15.17
	8H	9.51	9.96	10.03	10.48	10.97	13.92	14.37	14.45	14.89	15.38
	12H	10.30	10.70	10.81	11.19	11.77	14.25	14.65	14.77	15.15	15.72
12H	4H	7.26	7.80	7.75	8.29	8.76	13.35	13.89	13.84	14.38	14.85
	6H	9.00	9.45	9.53	9.97	10.46	13.72	14.17	14.25	14.69	15.18
	8H	10.01	10.41	10.52	10.90	11.48	14.03	14.43	14.55	14.93	15.50