

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: P1059779

Luminaire Tested: S123RDR-H775D930-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059779  
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-H775D930-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: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

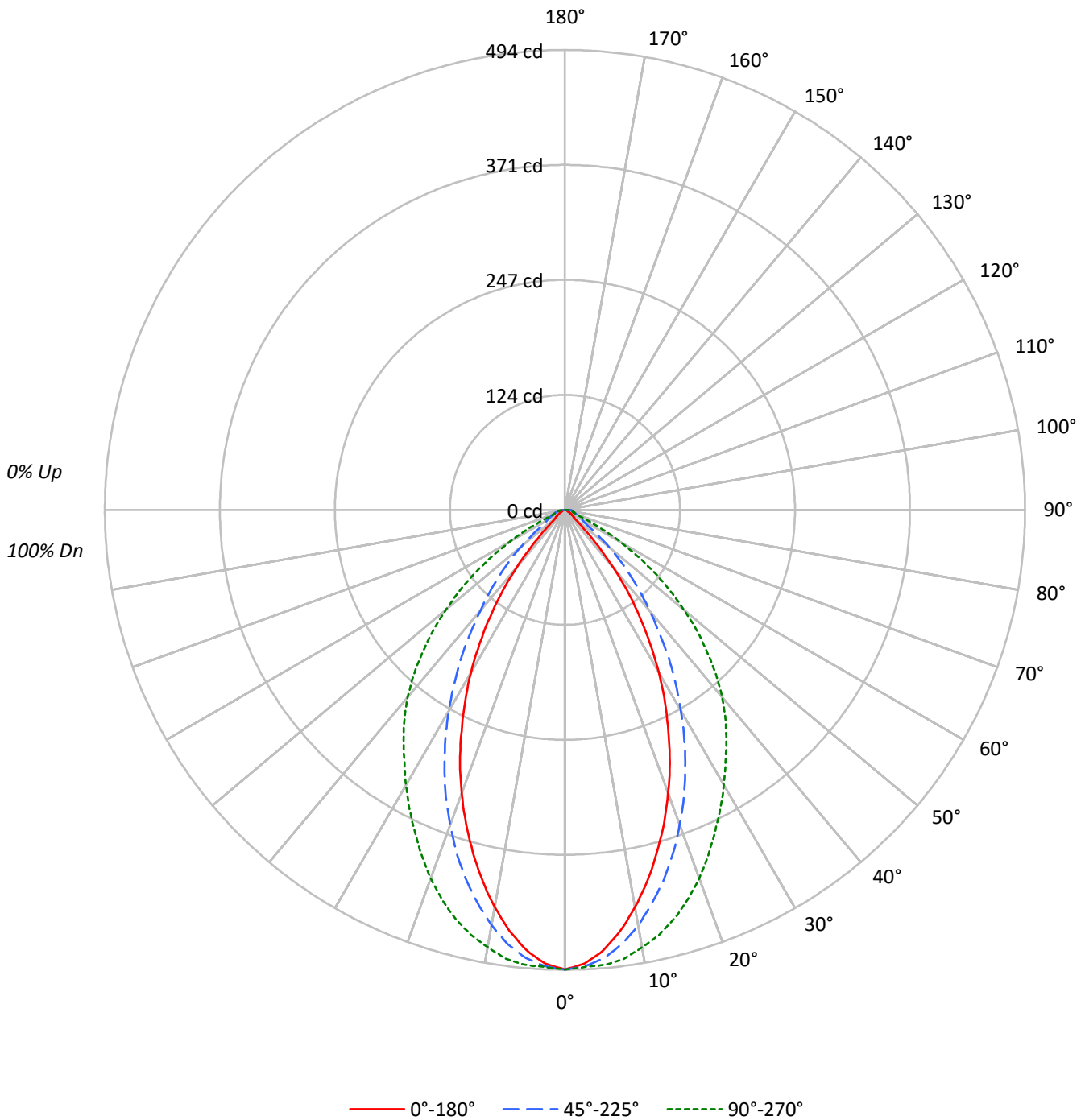
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 593.1 lumens  
Efficiency: N/A  
Efficacy: 25.2 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	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°	5798	5798	5798
5°	5598	5696	5784
10°	5168	5401	5690
15°	4635	4993	5525
20°	4047	4500	5265
25°	3404	3962	4940
30°	2733	3378	4628
35°	2003	2781	4329
40°	1239	2164	4027
45°	477	1629	3585
50°	234	1118	3034
55°	186	618	2381
60°	124	514	1595
65°	106	461	714
70°	103	415	415
75°	136	445	413
80°	203	561	460
85°	310	916	606

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3585 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.3	7.6
10°-20°	115.9	19.5
20°-30°	143.8	24.3
30°-40°	128.9	21.7
40°-50°	84.7	14.3
50°-60°	42.5	7.2
60°-70°	16.8	2.8
70°-80°	9.4	1.6
80°-90°	5.9	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°	305.0	51.4
0°-40°	433.9	73.2
0°-60°	561.1	94.6
0°-90°	593.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	593.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	494	494	494	494	494	
5°	475	482	483	486	491	44
15°	381	393	411	439	454	106
25°	263	279	306	349	381	120
35°	140	158	194	254	302	87
45°	29	48	98	165	216	27
55°	9	11	30	82	116	8
65°	4	11	17	21	26	4
75°	3	10	10	9	9	3
85°	2	7	7	7	4	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	493.8	493.8	493.8	493.8	493.8
2.5°	487.7	494.5	490.7	490.7	491.5
5°	474.9	482.4	483.2	486.2	490.7
7.5°	456.0	465.8	470.4	479.4	486.2
10°	433.4	443.9	453.0	468.9	477.2
12.5°	408.5	419.0	432.6	454.5	467.3
15°	381.3	393.4	410.7	438.7	454.5
17.5°	353.3	365.4	386.6	418.3	438.7
20°	323.9	337.5	360.1	396.4	421.3
22.5°	294.4	309.5	333.7	373.0	401.7
25°	262.7	279.3	305.8	348.8	381.3
27.5°	232.5	249.9	277.8	324.6	361.6
30°	201.6	218.9	249.1	299.7	341.3
32.5°	169.9	189.5	221.2	276.3	320.9
35°	139.7	158.5	194.0	253.7	302.0
37.5°	110.2	129.1	166.1	231.8	283.1
40°	80.8	100.4	141.2	210.6	262.7
42.5°	52.8	73.2	119.3	189.5	240.1
45°	28.7	47.6	98.1	165.3	215.9
47.5°	15.9	25.7	79.3	142.7	192.5
50°	12.8	14.3	61.2	121.6	166.1
52.5°	10.6	12.1	43.8	101.2	141.9
55°	9.1	10.6	30.2	81.5	116.3
57.5°	7.5	9.1	24.2	62.7	91.4
60°	5.3	9.1	21.9	46.1	67.9
62.5°	4.5	9.1	18.9	31.7	45.3
65°	3.8	10.6	16.6	21.1	25.7
67.5°	3.0	10.6	14.3	13.6	13.6
70°	3.0	10.6	12.1	11.3	12.1
72.5°	3.0	11.3	11.3	10.6	10.6
75°	3.0	9.8	9.8	9.1	9.1
77.5°	3.0	9.1	9.1	8.3	8.3
80°	3.0	8.3	8.3	7.5	6.8
82.5°	3.0	7.5	7.5	6.8	6.0
85°	2.3	6.8	6.8	6.8	4.5
87.5°	2.3	6.0	6.8	6.0	3.8
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	0.00	0.00	0.15	0.47	12.66	13.91	13.02	14.23	14.54
	3H	1.10	2.21	1.48	2.54	2.91	12.74	13.85	13.12	14.18	14.54
	4H	2.26	3.29	2.66	3.64	4.03	12.80	13.83	13.20	14.19	14.57
	6H	3.30	4.25	3.72	4.62	5.02	12.90	13.85	13.31	14.22	14.61
	8H	3.84	4.74	4.27	5.13	5.53	12.96	13.86	13.39	14.25	14.65
	12H	4.32	5.18	4.76	5.56	6.00	13.02	13.88	13.46	14.27	14.70
4H	2H	1.83	2.87	2.23	3.22	3.60	12.52	13.55	12.92	13.90	14.29
	3H	4.29	5.14	4.71	5.54	5.95	12.69	13.54	13.10	13.94	14.35
	4H	5.63	6.39	6.07	6.81	7.25	12.82	13.58	13.26	14.00	14.44
	6H	6.76	7.42	7.23	7.87	8.33	13.03	13.69	13.50	14.13	14.60
	8H	7.27	7.88	7.74	8.33	8.80	13.16	13.77	13.63	14.22	14.69
	12H	7.73	8.27	8.21	8.75	9.23	13.32	13.85	13.80	14.34	14.81
8H	4H	6.55	7.16	7.02	7.61	8.08	12.82	13.43	13.29	13.88	14.35
	6H	8.15	8.65	8.65	9.15	9.63	13.15	13.65	13.65	14.15	14.63
	8H	8.97	9.42	9.49	9.93	10.43	13.38	13.83	13.90	14.34	14.84
	12H	9.75	10.15	10.26	10.64	11.22	13.70	14.10	14.22	14.60	15.17
12H	4H	6.72	7.26	7.21	7.74	8.22	12.81	13.35	13.30	13.84	14.31
	6H	8.46	8.91	8.98	9.43	9.92	13.18	13.63	13.70	14.15	14.64
	8H	9.46	9.86	9.98	10.36	10.93	13.49	13.89	14.00	14.38	14.96