

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: P1059761

Luminaire Tested: S123RDR-H775D850-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059761  
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-H775D850-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, 80 CRI LEDS  
Ballast/Driver: -

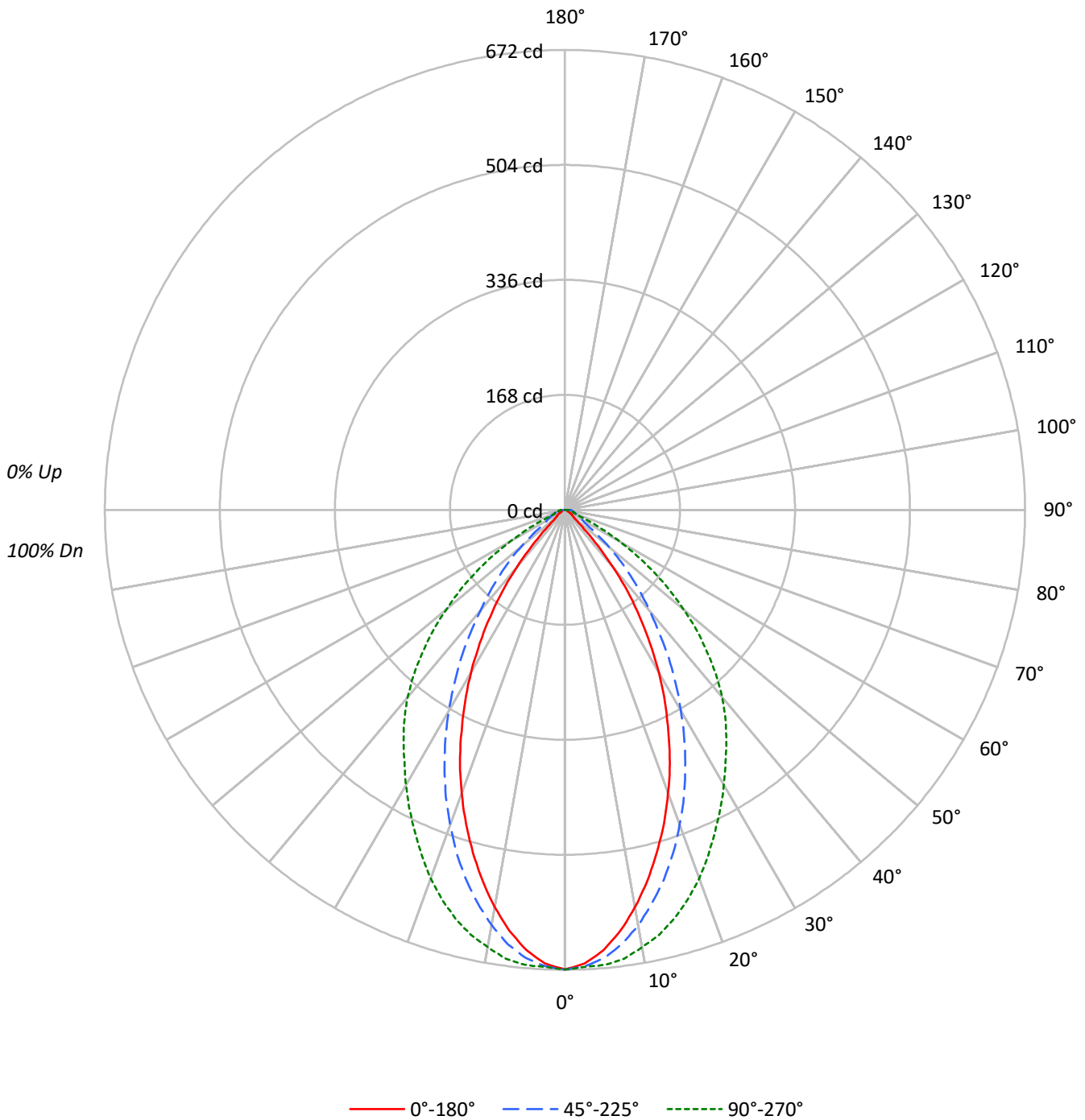
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 806.8 lumens  
Efficiency: N/A  
Efficacy: 34.3 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°	7886	7886	7886
5°	7615	7748	7868
10°	7029	7347	7738
15°	6304	6792	7515
20°	5506	6122	7161
25°	4631	5389	6719
30°	3718	4595	6294
35°	2724	3783	5889
40°	1685	2943	5478
45°	648	2217	4877
50°	320	1520	4127
55°	252	841	3239
60°	169	700	2170
65°	142	628	970
70°	141	563	563
75°	186	608	558
80°	277	764	622
85°	418	1240	835

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4877 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.6	7.6
10°-20°	157.7	19.5
20°-30°	195.7	24.3
30°-40°	175.3	21.7
40°-50°	115.2	14.3
50°-60°	57.7	7.2
60°-70°	22.8	2.8
70°-80°	12.8	1.6
80°-90°	8.0	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°	414.9	51.4
0°-40°	590.2	73.2
0°-60°	763.2	94.6
0°-90°	806.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	806.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	672	672	672	672	672	
5°	646	656	657	661	668	60
15°	519	535	559	597	618	145
25°	357	380	416	474	519	163
35°	190	216	264	345	411	118
45°	39	65	134	225	294	37
55°	12	14	41	111	158	11
65°	5	14	23	29	35	5
75°	4	13	13	12	12	4
85°	3	9	9	9	6	3
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	671.6	671.6	671.6	671.6	671.6
2.5°	663.4	672.7	667.5	667.5	668.6
5°	646.0	656.2	657.3	661.4	667.5
7.5°	620.3	633.6	639.8	652.1	661.4
10°	589.5	603.9	616.2	637.8	649.0
12.5°	555.6	570.0	588.5	618.2	635.7
15°	518.6	535.1	558.7	596.7	618.2
17.5°	480.6	497.1	525.8	568.9	596.7
20°	440.6	459.1	489.9	539.2	573.1
22.5°	400.5	421.1	453.9	507.3	546.4
25°	357.4	380.0	415.9	474.5	518.6
27.5°	316.3	339.9	377.9	441.6	491.9
30°	274.2	297.8	338.9	407.7	464.2
32.5°	231.1	257.8	300.9	375.9	436.5
35°	190.0	215.7	263.9	345.1	410.8
37.5°	149.9	175.6	225.9	315.3	385.1
40°	109.9	136.6	192.0	286.5	357.4
42.5°	71.9	99.6	162.3	257.8	326.6
45°	39.0	64.7	133.5	224.9	293.7
47.5°	21.6	34.9	107.8	194.1	261.9
50°	17.5	19.5	83.2	165.3	225.9
52.5°	14.4	16.4	59.6	137.6	193.1
55°	12.3	14.4	41.1	110.9	158.2
57.5°	10.3	12.3	32.9	85.2	124.3
60°	7.2	12.3	29.8	62.6	92.4
62.5°	6.2	12.3	25.7	43.1	61.6
65°	5.1	14.4	22.6	28.8	34.9
67.5°	4.1	14.4	19.5	18.5	18.5
70°	4.1	14.4	16.4	15.4	16.4
72.5°	4.1	15.4	15.4	14.4	14.4
75°	4.1	13.4	13.4	12.3	12.3
77.5°	4.1	12.3	12.3	11.3	11.3
80°	4.1	11.3	11.3	10.3	9.2
82.5°	4.1	10.3	10.3	9.2	8.2
85°	3.1	9.2	9.2	9.2	6.2
87.5°	3.1	8.2	9.2	8.2	5.1
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	0.00	0.88	0.00	1.19	1.51	13.72	14.98	14.08	15.29	15.60
	3H	2.16	3.27	2.54	3.60	3.96	13.80	14.91	14.18	15.24	15.61
	4H	3.33	4.36	3.73	4.71	5.10	13.86	14.90	14.27	15.25	15.63
	6H	4.37	5.32	4.79	5.69	6.09	13.96	14.91	14.38	15.28	15.68
	8H	4.91	5.81	5.34	6.20	6.61	14.02	14.92	14.45	15.31	15.72
	12H	5.39	6.25	5.83	6.64	7.07	14.09	14.95	14.52	15.33	15.76
4H	2H	2.89	3.93	3.30	4.28	4.66	13.58	14.62	13.98	14.97	15.35
	3H	5.36	6.20	5.77	6.61	7.01	13.75	14.60	14.17	15.01	15.41
	4H	6.71	7.46	7.14	7.88	8.33	13.88	14.64	14.32	15.06	15.50
	6H	7.84	8.49	8.30	8.94	9.40	14.10	14.75	14.56	15.20	15.67
	8H	8.35	8.96	8.82	9.40	9.88	14.22	14.83	14.69	15.28	15.75
	12H	8.80	9.34	9.29	9.83	10.30	14.38	14.92	14.87	15.40	15.88
8H	4H	7.62	8.23	8.09	8.68	9.15	13.88	14.50	14.35	14.94	15.42
	6H	9.22	9.72	9.72	10.22	10.70	14.22	14.72	14.72	15.21	15.70
	8H	10.05	10.50	10.57	11.02	11.51	14.44	14.89	14.97	15.41	15.90
	12H	10.83	11.22	11.34	11.72	12.29	14.77	15.17	15.28	15.66	16.23
12H	4H	7.79	8.33	8.28	8.81	9.29	13.87	14.41	14.36	14.90	15.37
	6H	9.54	9.99	10.06	10.50	11.00	14.25	14.70	14.77	15.21	15.71
	8H	10.55	10.95	11.06	11.44	12.01	14.55	14.95	15.07	15.45	16.02