

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: P1059763

Luminaire Tested: S123RDR-H775D850-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059763  
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-H775D850-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: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

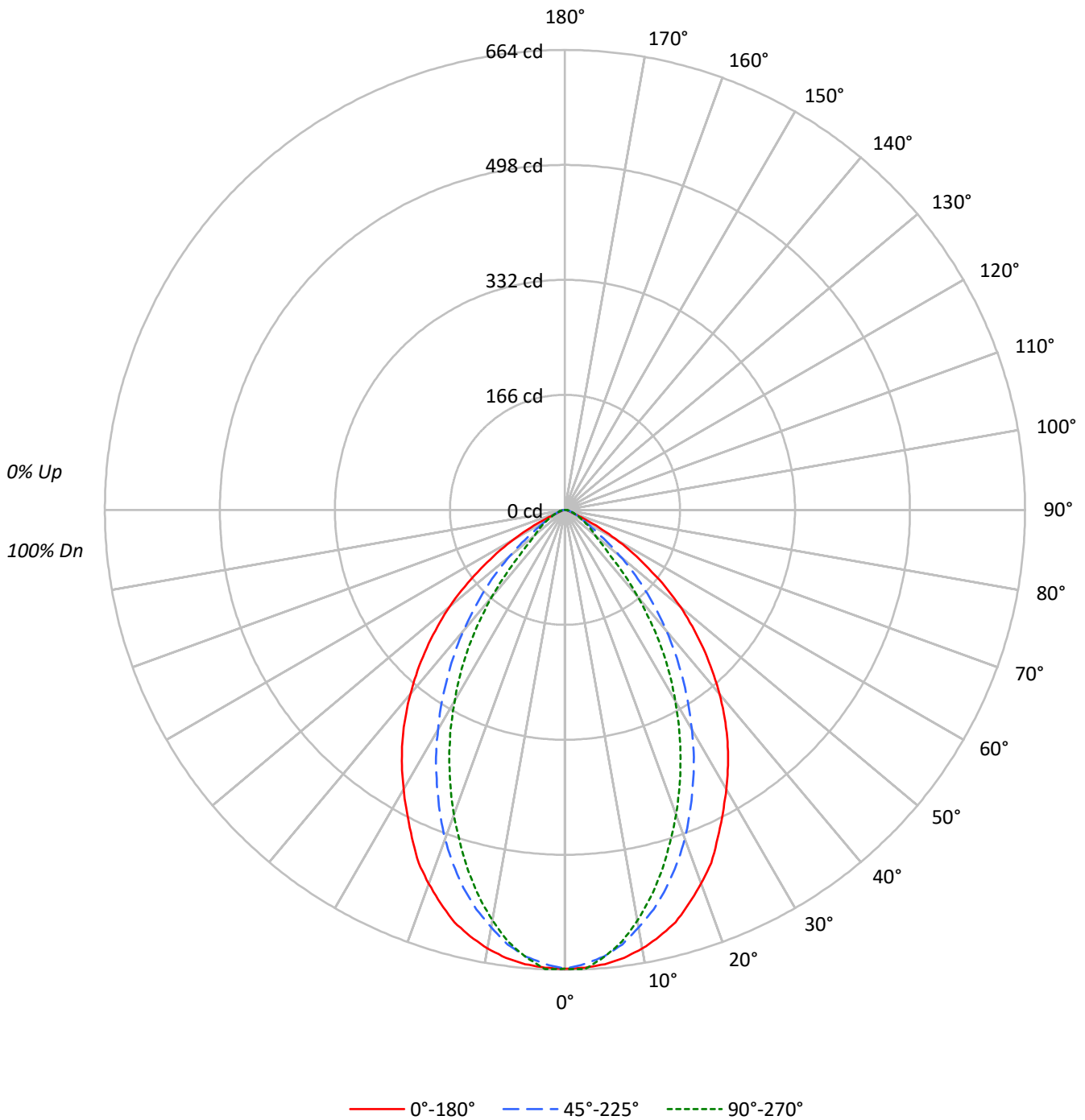
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 855.4 lumens  
Efficiency: N/A  
Efficacy: 36.4 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): 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	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39

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

	0°	45°	90°
0°	7781	7781	7781
5°	7762	7629	7641
10°	7668	7301	7179
15°	7493	6870	6559
20°	7178	6319	5857
25°	6765	5661	5116
30°	6314	4965	4312
35°	5866	4235	3470
40°	5314	3490	2515
45°	4685	2708	1516
50°	3971	1893	1030
55°	3024	1134	862
60°	1975	723	674
65°	825	542	542
70°	282	388	422
75°	231	281	327
80°	142	210	277
85°	135	135	283

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4685 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.2	7.2
10°-20°	160.1	18.7
20°-30°	205.4	24.0
30°-40°	192.7	22.5
40°-50°	134.4	15.7
50°-60°	69.5	8.1
60°-70°	23.8	2.8
70°-80°	6.8	0.8
80°-90°	1.4	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°	426.7	49.9
0°-40°	619.4	72.4
0°-60°	823.4	96.3
0°-90°	855.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	855.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	663	663	663	663	663	
5°	658	658	647	650	648	62
15°	616	601	565	547	540	173
25°	522	489	437	407	395	240
35°	409	359	295	257	242	255
45°	282	231	163	113	91	217
55°	148	111	55	43	42	133
65°	30	26	20	18	20	35
75°	5	5	6	7	7	5
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°	662.6	662.6	662.6	662.6	662.6
2.5°	661.6	662.6	656.4	662.6	663.6
5°	658.5	657.5	647.2	650.3	648.2
7.5°	652.3	649.3	632.8	628.7	628.7
10°	643.1	636.9	612.3	605.2	602.1
12.5°	630.8	622.6	590.8	577.5	572.3
15°	616.4	601.0	565.1	546.7	539.5
17.5°	595.9	575.4	536.4	514.9	503.6
20°	574.4	548.7	505.7	480.0	468.7
22.5°	551.8	521.0	471.8	444.1	431.8
25°	522.1	489.2	436.9	407.2	394.9
27.5°	493.4	458.5	403.1	369.2	356.9
30°	465.7	424.6	366.2	333.3	318.0
32.5°	438.0	391.8	331.3	295.4	281.0
35°	409.2	359.0	295.4	257.4	242.1
37.5°	378.5	327.2	261.5	220.5	202.1
40°	346.7	293.3	227.7	181.5	164.1
42.5°	314.9	262.6	193.9	146.7	126.2
45°	282.1	230.8	163.1	112.8	91.3
47.5°	249.2	199.0	133.3	82.1	68.7
50°	217.4	169.2	103.6	60.5	56.4
52.5°	182.6	140.5	78.0	50.3	49.2
55°	147.7	110.8	55.4	43.1	42.1
57.5°	116.9	86.2	40.0	35.9	34.9
60°	84.1	61.5	30.8	29.7	28.7
62.5°	55.4	42.1	24.6	23.6	23.6
65°	29.7	25.6	19.5	18.5	19.5
67.5°	12.3	14.4	14.4	15.4	15.4
70°	8.2	9.2	11.3	12.3	12.3
72.5°	6.2	7.2	8.2	9.2	9.2
75°	5.1	5.1	6.2	7.2	7.2
77.5°	3.1	4.1	4.1	5.1	6.2
80°	2.1	3.1	3.1	4.1	4.1
82.5°	1.0	2.1	2.1	3.1	3.1
85°	1.0	1.0	1.0	1.0	2.1
87.5°	0.0	0.0	0.0	0.0	1.0
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	13.46	14.72	13.83	15.03	15.35	6.97	8.23	7.33	8.54	8.85
	3H	13.41	14.52	13.80	14.85	15.22	7.74	8.85	8.12	9.18	9.55
	4H	13.36	14.39	13.77	14.74	15.13	7.94	8.97	8.35	9.33	9.71
	6H	13.29	14.24	13.71	14.61	15.00	8.09	9.03	8.50	9.40	9.80
	8H	13.25	14.14	13.68	14.53	14.94	8.13	9.02	8.56	9.41	9.81
	12H	13.21	14.06	13.64	14.44	14.87	8.14	9.00	8.58	9.38	9.81
4H	2H	13.31	14.34	13.71	14.69	15.07	7.22	8.25	7.63	8.60	8.99
	3H	13.29	14.13	13.71	14.53	14.94	8.13	8.97	8.54	9.37	9.77
	4H	13.24	13.98	13.68	14.41	14.85	8.40	9.15	8.84	9.57	10.01
	6H	13.19	13.82	13.65	14.27	14.74	8.62	9.26	9.09	9.71	10.18
	8H	13.13	13.73	13.60	14.18	14.65	8.68	9.28	9.15	9.73	10.20
	12H	13.09	13.61	13.58	14.10	14.57	8.72	9.25	9.21	9.73	10.21
8H	4H	13.13	13.72	13.60	14.17	14.64	8.39	8.98	8.86	9.43	9.90
	6H	13.07	13.55	13.57	14.05	14.53	8.66	9.14	9.16	9.64	10.12
	8H	13.02	13.45	13.54	13.97	14.46	8.77	9.20	9.29	9.72	10.21
	12H	12.98	13.36	13.50	13.86	14.43	8.84	9.23	9.36	9.72	10.30
12H	4H	13.08	13.61	13.57	14.09	14.57	8.35	8.87	8.84	9.36	9.83
	6H	13.01	13.44	13.53	13.96	14.46	8.62	9.06	9.14	9.57	10.07
	8H	12.98	13.36	13.50	13.86	14.43	8.76	9.15	9.28	9.64	10.21