

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: P1059754

Luminaire Tested: S123RDR-H775D840-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059754
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-H775D840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

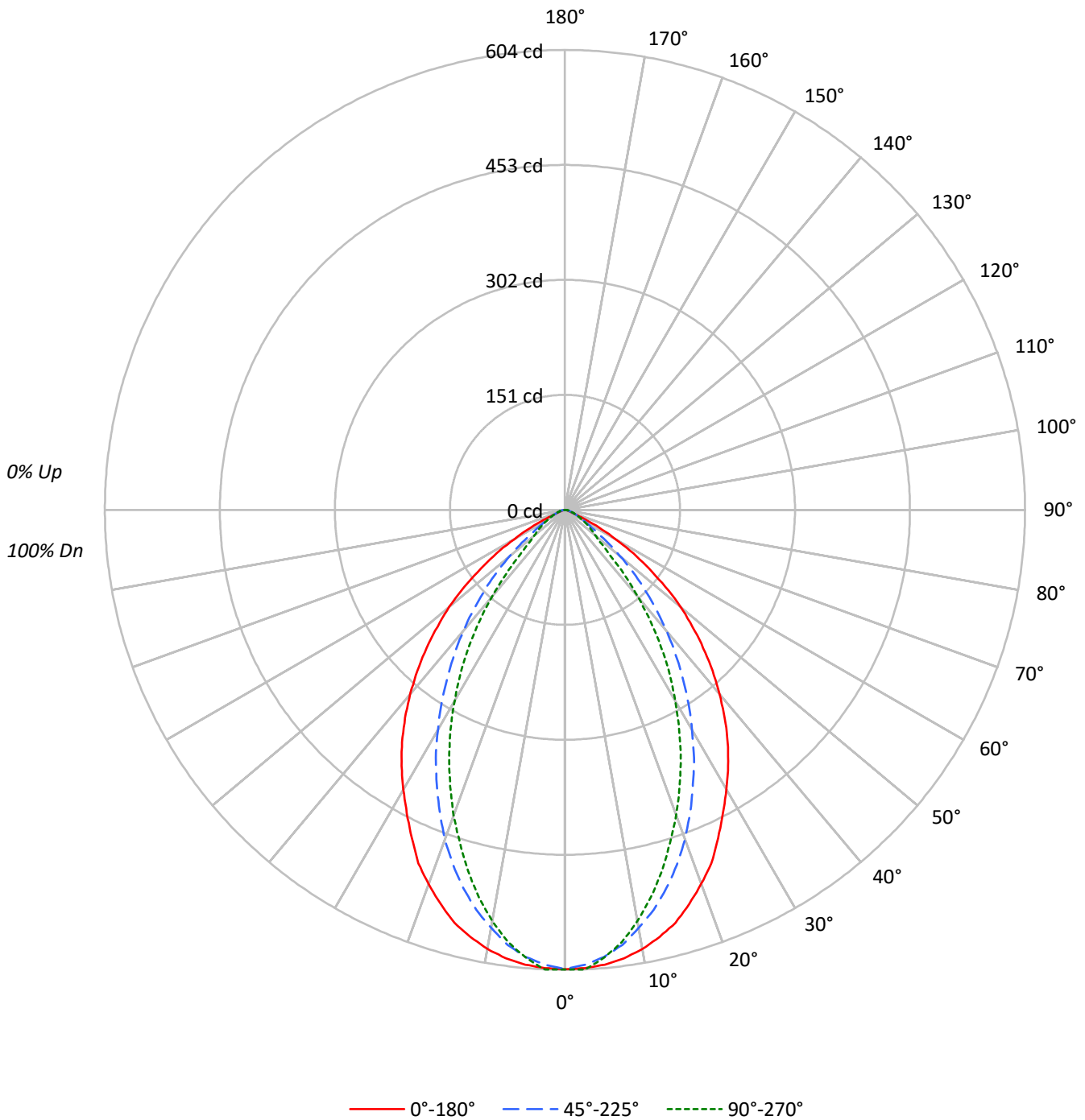
Lumens per Lamp: N/A
Luminaire Lumens: 778.9 lumens
Efficiency: N/A
Efficacy: 33.1 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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	71	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	49	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°	7085	7085	7085
5°	7068	6946	6958
10°	6982	6649	6538
15°	6824	6256	5973
20°	6535	5754	5333
25°	6159	5155	4659
30°	5749	4521	3925
35°	5343	3856	3159
40°	4839	3178	2290
45°	4265	2466	1380
50°	3617	1723	939
55°	2754	1032	784
60°	1799	658	615
65°	753	492	492
70°	257	354	385
75°	213	254	295
80°	128	189	250
85°	121	121	256

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4265 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.7	7.2
10°-20°	145.8	18.7
20°-30°	187.0	24.0
30°-40°	175.5	22.5
40°-50°	122.4	15.7
50°-60°	63.3	8.1
60°-70°	21.6	2.8
70°-80°	6.2	0.8
80°-90°	1.3	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°	388.6	49.9
0°-40°	564.1	72.4
0°-60°	749.8	96.3
0°-90°	778.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	778.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	603	603	603	603	603	
5°	600	599	589	592	590	57
15°	561	547	515	498	491	157
25°	475	446	398	371	360	219
35°	373	327	269	234	220	232
45°	257	210	148	103	83	198
55°	134	101	50	39	38	121
65°	27	23	18	17	18	32
75°	5	5	6	6	6	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°	603.4	603.4	603.4	603.4	603.4
2.5°	602.4	603.4	597.8	603.4	604.3
5°	599.6	598.7	589.3	592.2	590.3
7.5°	594.0	591.2	576.3	572.5	572.5
10°	585.6	580.0	557.6	551.1	548.3
12.5°	574.4	566.9	538.0	525.8	521.2
15°	561.3	547.3	514.6	497.8	491.3
17.5°	542.7	524.0	488.5	468.9	458.6
20°	523.0	499.7	460.5	437.1	426.8
22.5°	502.5	474.5	429.6	404.4	393.2
25°	475.4	445.5	397.9	370.8	359.6
27.5°	449.3	417.5	367.1	336.2	325.0
30°	424.0	386.7	333.4	303.5	289.5
32.5°	398.8	356.8	301.7	269.0	255.9
35°	372.7	326.9	269.0	234.4	220.4
37.5°	344.6	297.9	238.2	200.8	184.0
40°	315.7	267.1	207.3	165.3	149.4
42.5°	286.7	239.1	176.5	133.6	114.9
45°	256.8	210.1	148.5	102.7	83.1
47.5°	227.0	181.2	121.4	74.7	62.6
50°	198.0	154.1	94.3	55.1	51.4
52.5°	166.3	128.0	71.0	45.8	44.8
55°	134.5	100.9	50.4	39.2	38.3
57.5°	106.5	78.5	36.4	32.7	31.8
60°	76.6	56.0	28.0	27.1	26.2
62.5°	50.4	38.3	22.4	21.5	21.5
65°	27.1	23.3	17.7	16.8	17.7
67.5°	11.2	13.1	13.1	14.0	14.0
70°	7.5	8.4	10.3	11.2	11.2
72.5°	5.6	6.5	7.5	8.4	8.4
75°	4.7	4.7	5.6	6.5	6.5
77.5°	2.8	3.7	3.7	4.7	5.6
80°	1.9	2.8	2.8	3.7	3.7
82.5°	0.9	1.9	1.9	2.8	2.8
85°	0.9	0.9	0.9	0.9	1.9
87.5°	0.0	0.0	0.0	0.0	0.9
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	13.14	14.40	13.50	14.71	15.03	6.64	7.90	7.01	8.22	8.53
	3H	13.09	14.20	13.47	14.53	14.90	7.42	8.53	7.80	8.86	9.22
	4H	13.04	14.07	13.44	14.42	14.80	7.62	8.65	8.02	9.00	9.38
	6H	12.97	13.91	13.38	14.28	14.68	7.76	8.70	8.18	9.07	9.47
	8H	12.93	13.82	13.36	14.21	14.61	7.80	8.69	8.23	9.08	9.48
	12H	12.88	13.73	13.32	14.12	14.55	7.81	8.67	8.25	9.05	9.48
4H	2H	12.98	14.01	13.39	14.37	14.75	6.90	7.93	7.30	8.28	8.66
	3H	12.97	13.80	13.38	14.21	14.61	7.81	8.64	8.22	9.05	9.45
	4H	12.92	13.66	13.35	14.08	14.53	8.08	8.82	8.51	9.24	9.68
	6H	12.86	13.50	13.33	13.95	14.42	8.29	8.93	8.76	9.38	9.84
	8H	12.81	13.40	13.28	13.85	14.32	8.35	8.95	8.82	9.39	9.87
	12H	12.76	13.29	13.25	13.77	14.25	8.39	8.91	8.88	9.40	9.87
8H	4H	12.81	13.40	13.28	13.85	14.32	8.06	8.65	8.53	9.10	9.57
	6H	12.74	13.23	13.25	13.72	14.21	8.33	8.81	8.83	9.31	9.79
	8H	12.69	13.13	13.22	13.64	14.14	8.43	8.87	8.96	9.38	9.88
	12H	12.65	13.04	13.17	13.53	14.11	8.51	8.89	9.02	9.39	9.96
12H	4H	12.76	13.28	13.25	13.77	14.24	8.02	8.54	8.51	9.03	9.50
	6H	12.68	13.12	13.21	13.64	14.13	8.29	8.72	8.81	9.24	9.73
	8H	12.65	13.04	13.17	13.54	14.11	8.43	8.81	8.94	9.31	9.88