

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: P1059418

Luminaire Tested: S123RDR-H1000D835-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059418
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D835-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

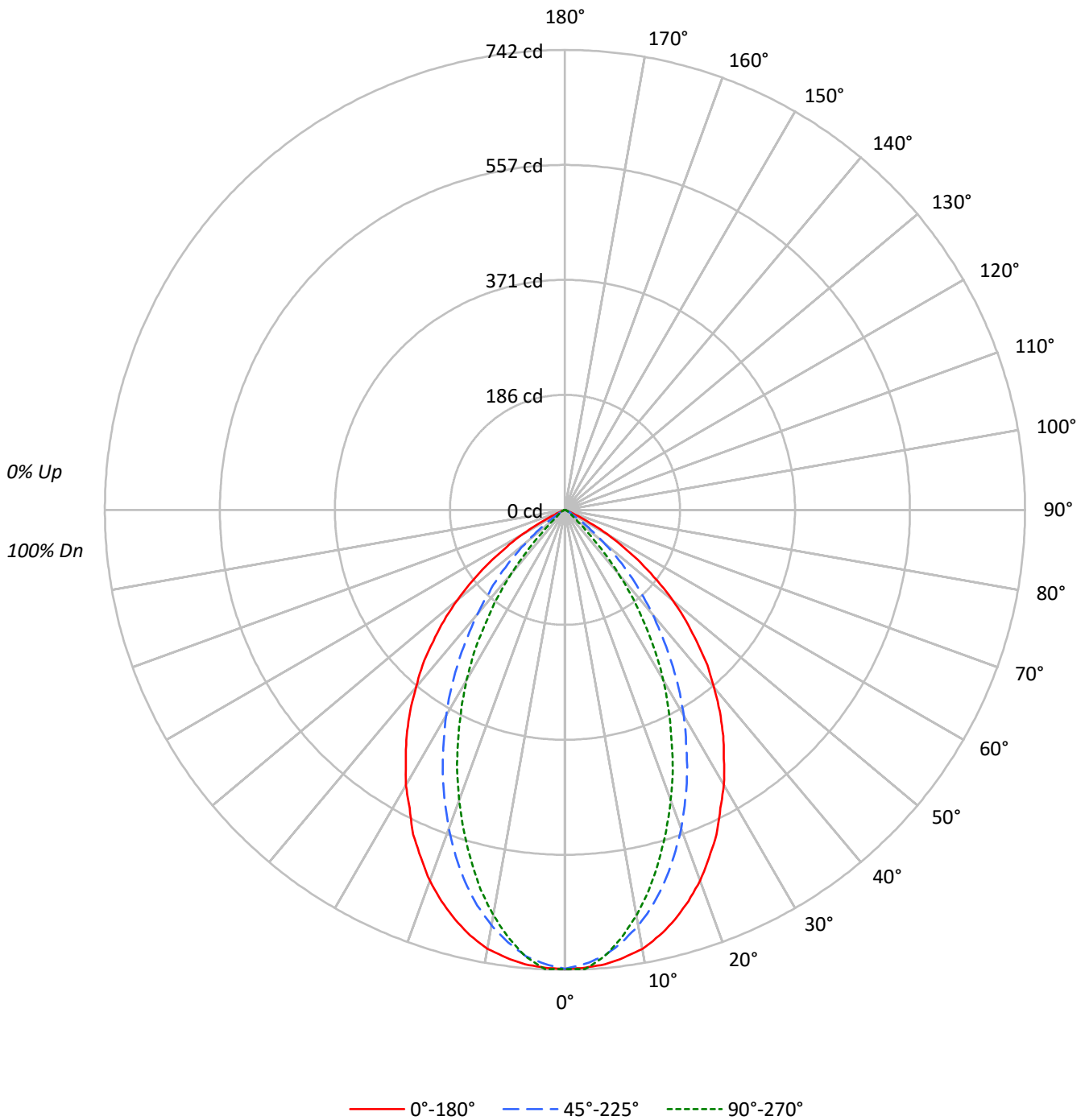
Lumens per Lamp: N/A
Luminaire Lumens: 845.2 lumens
Efficiency: N/A
Efficacy: 27.1 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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				100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92				92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84				84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76				76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69				69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63				63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58				58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53				53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49				49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46				46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42				42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8696	8696	8696
5°	8674	8519	8533
10°	8575	8120	7921
15°	8322	7554	7119
20°	7959	6840	6229
25°	7494	6042	5269
30°	6953	5190	4301
35°	6378	4292	3197
40°	5722	3363	2048
45°	4990	2456	852
50°	4140	1460	327
55°	3052	610	244
60°	1848	223	141
65°	497	133	67
70°	0	41	41
75°	0	0	54
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4990 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	8.1
10°-20°	176.0	20.8
20°-30°	219.3	25.9
30°-40°	196.1	23.2
40°-50°	123.7	14.6
50°-60°	51.8	6.1
60°-70°	9.8	1.2
70°-80°	0.3	0.0
80°-90°	0.0	0.0
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°	463.4	54.8
0°-40°	659.5	78.0
0°-60°	835.1	98.8
0°-90°	845.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	845.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	741	741	741	741	741	
5°	736	735	723	725	724	70
15°	685	668	621	595	586	192
25°	578	532	466	426	407	265
35°	445	380	299	246	223	277
45°	300	234	148	79	51	232
55°	149	103	30	12	12	134
65°	18	13	5	2	2	25
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.6	740.6	740.6	740.6	740.6
2.5°	739.4	740.6	733.5	740.6	741.8
5°	735.9	734.7	722.7	725.1	723.9
7.5°	728.7	725.1	703.7	698.9	696.5
10°	719.2	709.6	681.0	669.1	664.3
12.5°	703.7	690.5	653.6	634.5	627.3
15°	684.6	667.9	621.4	595.1	585.6
17.5°	661.9	638.1	585.6	557.0	542.7
20°	636.9	603.5	547.4	512.8	498.5
22.5°	607.1	570.1	506.9	469.9	454.4
25°	578.4	531.9	466.3	425.8	406.7
27.5°	542.7	493.8	423.4	381.6	361.4
30°	512.8	456.8	382.8	336.3	317.2
32.5°	477.1	418.6	341.1	289.8	271.9
35°	444.9	380.5	299.4	245.7	223.0
37.5°	410.3	343.5	257.6	201.6	180.1
40°	373.3	306.5	219.4	157.4	133.6
42.5°	339.9	269.5	181.3	116.9	93.0
45°	300.5	233.8	147.9	78.7	51.3
47.5°	264.8	200.4	112.1	44.1	27.4
50°	226.6	165.8	79.9	22.7	17.9
52.5°	187.2	132.4	52.5	15.5	14.3
55°	149.1	102.6	29.8	11.9	11.9
57.5°	112.1	73.9	15.5	9.5	8.3
60°	78.7	48.9	9.5	7.2	6.0
62.5°	45.3	28.6	7.2	4.8	4.8
65°	17.9	13.1	4.8	2.4	2.4
67.5°	1.2	3.6	2.4	1.2	1.2
70°	0.0	0.0	1.2	1.2	1.2
72.5°	0.0	0.0	1.2	1.2	1.2
75°	0.0	0.0	0.0	0.0	1.2
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	12.70	13.88	13.07	14.19	14.51	0.00	0.00	0.00	0.00	0.00
	3H	12.54	13.57	12.92	13.91	14.27	0.00	0.00	0.00	0.00	0.00
	4H	12.46	13.41	12.86	13.76	14.15	0.00	0.00	0.00	0.00	0.00
	6H	12.36	13.24	12.78	13.61	14.00	0.00	0.00	0.00	0.00	0.00
	8H	12.31	13.14	12.75	13.53	13.94	0.00	0.00	0.00	0.00	0.00
	12H	12.26	13.05	12.70	13.43	13.86	0.00	0.00	0.00	0.00	0.00
4H	2H	12.46	13.42	12.87	13.77	14.15	0.00	0.00	0.00	0.00	0.00
	3H	12.30	13.06	12.71	13.47	13.88	0.00	0.00	0.00	0.00	0.00
	4H	12.19	12.87	12.63	13.30	13.74	0.00	0.00	0.00	0.00	0.00
	6H	12.10	12.68	12.56	13.13	13.60	0.00	0.00	0.00	0.00	0.00
	8H	12.03	12.57	12.50	13.02	13.50	0.00	0.00	0.00	0.00	0.00
	12H	11.97	12.45	12.46	12.94	13.41	0.00	0.00	0.00	0.00	0.00
8H	4H	12.03	12.58	12.50	13.02	13.50	0.00	0.00	0.00	0.00	0.00
	6H	11.91	12.35	12.42	12.85	13.34	0.00	0.00	0.00	0.00	0.00
	8H	11.84	12.24	12.37	12.76	13.25	0.00	0.00	0.00	0.00	0.00
	12H	11.79	12.14	12.31	12.63	13.21	0.00	0.00	0.00	0.00	0.00
12H	4H	11.97	12.45	12.46	12.94	13.41	0.00	0.00	0.00	0.00	0.00
	6H	11.84	12.24	12.37	12.76	13.25	0.00	0.00	0.00	0.00	0.00
	8H	11.79	12.14	12.31	12.63	13.21	0.00	0.00	0.00	0.00	0.00