

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: P1059409

Luminaire Tested: S123RDR-H1000D830-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059409
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-H1000D830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

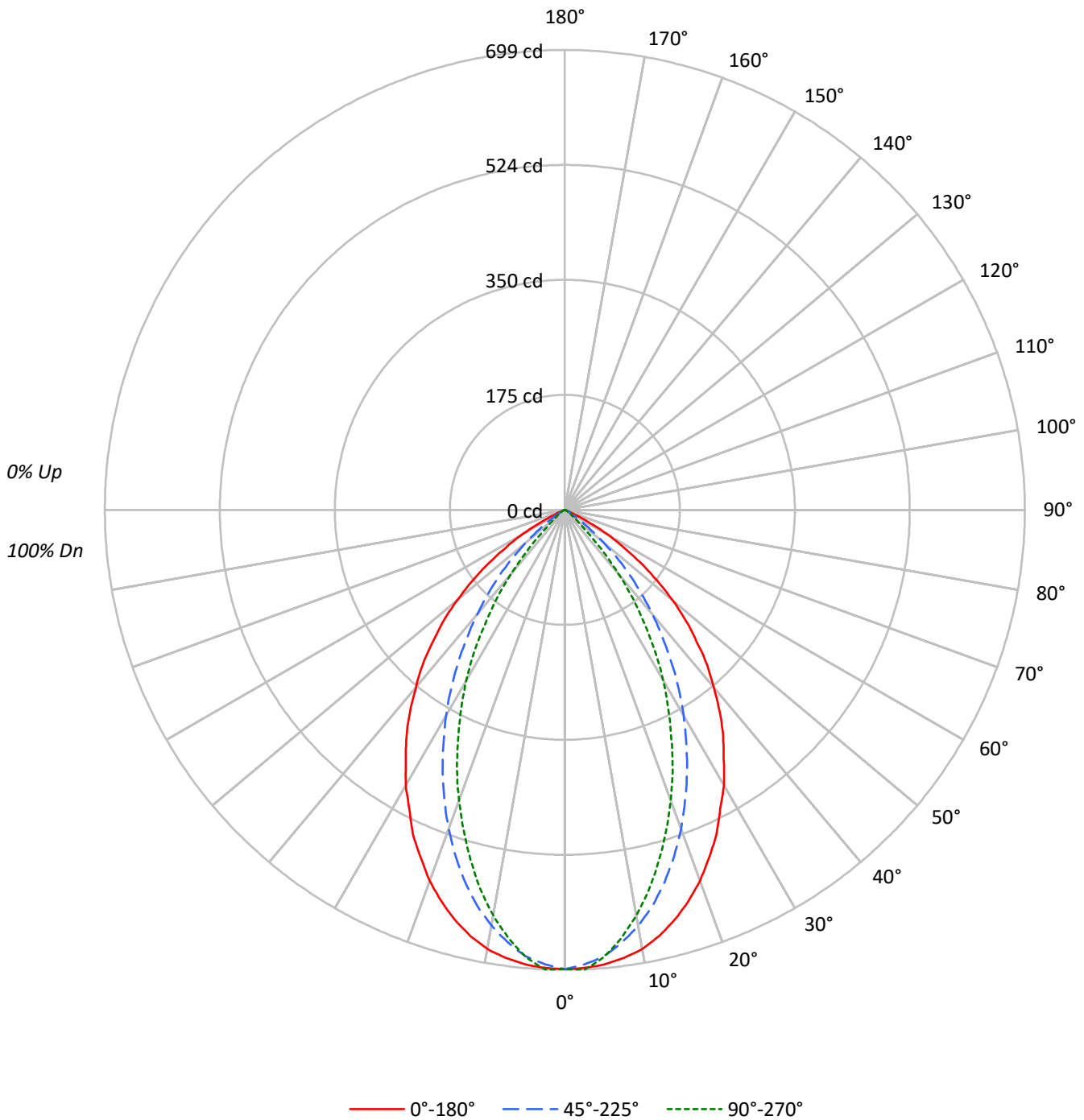
Lumens per Lamp: N/A
Luminaire Lumens: 796.6 lumens
Efficiency: N/A
Efficacy: 25.5 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8197	8197	8197
5°	8176	8030	8042
10°	8082	7654	7465
15°	7843	7120	6709
20°	7501	6448	5872
25°	7064	5694	4966
30°	6554	4892	4054
35°	6011	4045	3013
40°	5394	3170	1930
45°	4705	2315	802
50°	3902	1376	309
55°	2876	575	229
60°	1743	211	132
65°	470	125	61
70°	0	38	38
75°	0	0	50
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4705 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.3	8.1
10°-20°	165.8	20.8
20°-30°	206.7	25.9
30°-40°	184.8	23.2
40°-50°	116.7	14.6
50°-60°	48.8	6.1
60°-70°	9.2	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°	436.8	54.8
0°-40°	621.6	78.0
0°-60°	787.1	98.8
0°-90°	796.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	796.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	698	698	698	698	698	
5°	694	692	681	684	682	66
15°	645	630	586	561	552	181
25°	545	501	440	401	383	250
35°	419	359	282	232	210	261
45°	283	220	139	74	48	218
55°	140	97	28	11	11	126
65°	17	12	4	2	2	24
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°	698.1	698.1	698.1	698.1	698.1
2.5°	697.0	698.1	691.3	698.1	699.2
5°	693.6	692.5	681.2	683.5	682.3
7.5°	686.8	683.5	663.2	658.7	656.5
10°	677.8	668.9	641.9	630.6	626.1
12.5°	663.2	650.9	616.0	598.0	591.3
15°	645.2	629.5	585.7	560.9	551.9
17.5°	623.9	601.4	551.9	525.0	511.5
20°	600.3	568.8	516.0	483.4	469.9
22.5°	572.2	537.3	477.8	442.9	428.3
25°	545.2	501.4	439.5	401.3	383.3
27.5°	511.5	465.4	399.1	359.7	340.6
30°	483.4	430.5	360.8	317.0	299.0
32.5°	449.7	394.6	321.5	273.2	256.3
35°	419.3	358.6	282.2	231.6	210.2
37.5°	386.7	323.7	242.8	190.0	169.7
40°	351.9	288.9	206.8	148.4	125.9
42.5°	320.4	254.1	170.9	110.2	87.7
45°	283.3	220.3	139.4	74.2	48.3
47.5°	249.6	188.9	105.7	41.6	25.9
50°	213.6	156.3	75.3	21.4	16.9
52.5°	176.5	124.8	49.5	14.6	13.5
55°	140.5	96.7	28.1	11.2	11.2
57.5°	105.7	69.7	14.6	9.0	7.9
60°	74.2	46.1	9.0	6.7	5.6
62.5°	42.7	27.0	6.7	4.5	4.5
65°	16.9	12.4	4.5	2.2	2.2
67.5°	1.1	3.4	2.2	1.1	1.1
70°	0.0	0.0	1.1	1.1	1.1
72.5°	0.0	0.0	1.1	1.1	1.1
75°	0.0	0.0	0.0	0.0	1.1
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	12.50	13.68	12.87	13.99	14.30	0.00	0.00	0.00	0.00	0.00
	3H	12.34	13.37	12.72	13.70	14.07	0.00	0.00	0.00	0.00	0.00
	4H	12.26	13.21	12.66	13.56	13.95	0.00	0.00	0.00	0.00	0.00
	6H	12.16	13.03	12.58	13.41	13.80	0.00	0.00	0.00	0.00	0.00
	8H	12.11	12.93	12.55	13.33	13.73	0.00	0.00	0.00	0.00	0.00
	12H	12.06	12.85	12.50	13.23	13.66	0.00	0.00	0.00	0.00	0.00
4H	2H	12.26	13.21	12.66	13.57	13.95	0.00	0.00	0.00	0.00	0.00
	3H	12.09	12.86	12.51	13.27	13.67	0.00	0.00	0.00	0.00	0.00
	4H	11.99	12.67	12.43	13.09	13.54	0.00	0.00	0.00	0.00	0.00
	6H	11.89	12.48	12.36	12.93	13.40	0.00	0.00	0.00	0.00	0.00
	8H	11.83	12.37	12.30	12.82	13.30	0.00	0.00	0.00	0.00	0.00
	12H	11.77	12.25	12.26	12.73	13.21	0.00	0.00	0.00	0.00	0.00
8H	4H	11.83	12.37	12.30	12.82	13.30	0.00	0.00	0.00	0.00	0.00
	6H	11.71	12.15	12.22	12.65	13.14	0.00	0.00	0.00	0.00	0.00
	8H	11.64	12.04	12.17	12.56	13.05	0.00	0.00	0.00	0.00	0.00
	12H	11.59	11.94	12.10	12.43	13.01	0.00	0.00	0.00	0.00	0.00
12H	4H	11.77	12.25	12.26	12.73	13.21	0.00	0.00	0.00	0.00	0.00
	6H	11.64	12.04	12.17	12.56	13.05	0.00	0.00	0.00	0.00	0.00
	8H	11.59	11.94	12.10	12.43	13.01	0.00	0.00	0.00	0.00	0.00