

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: P1059436

Luminaire Tested: S123RDR-H1000D850-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059436
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-H1000D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

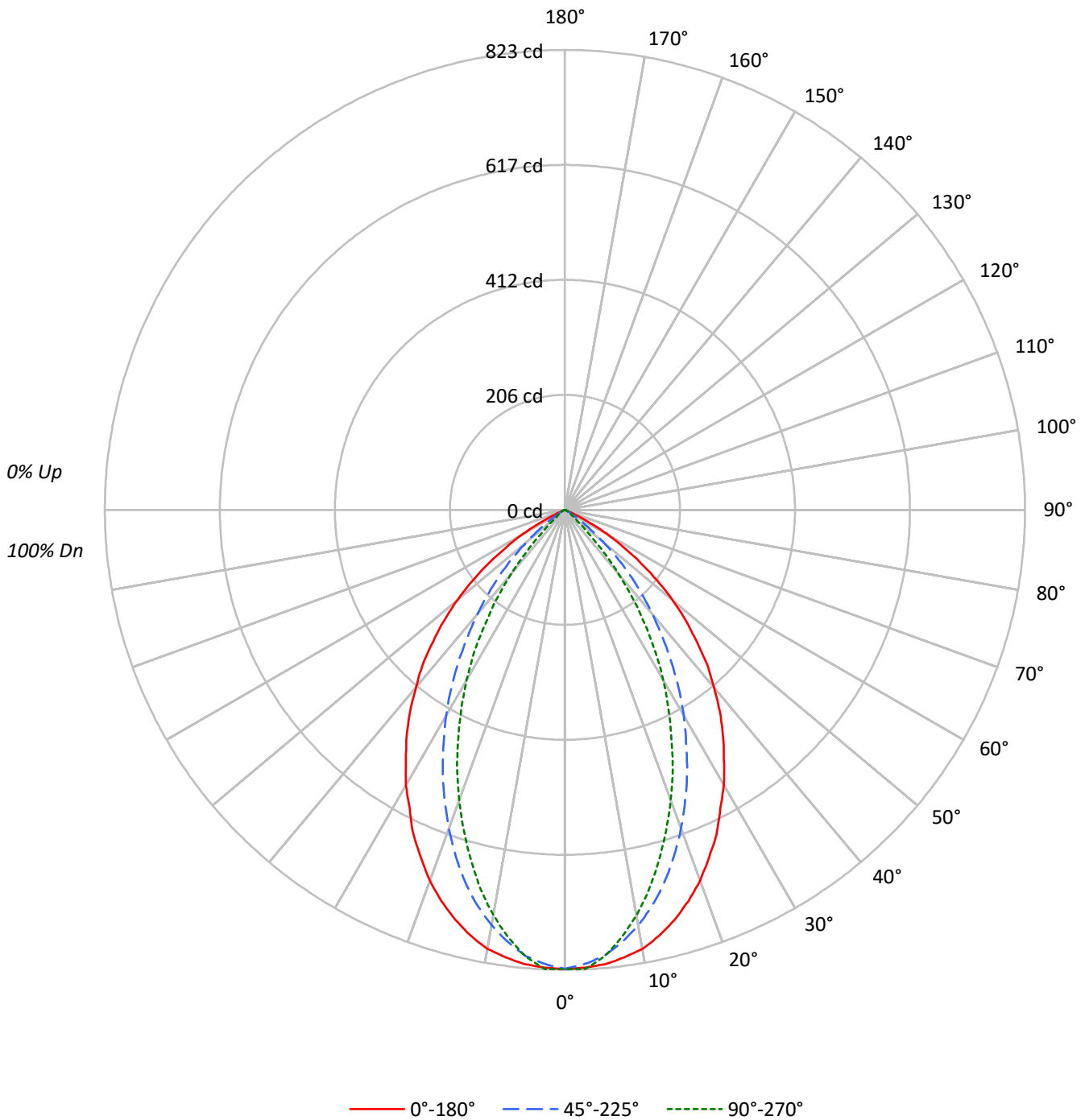
Lumens per Lamp: N/A
Luminaire Lumens: 937.2 lumens
Efficiency: N/A
Efficacy: 30.0 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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°	9645	9645	9645
5°	9620	9448	9464
10°	9510	9005	8784
15°	9229	8377	7895
20°	8826	7586	6909
25°	8311	6701	5843
30°	7711	5757	4770
35°	7071	4759	3545
40°	6346	3731	2270
45°	5535	2723	945
50°	4591	1619	362
55°	3384	678	270
60°	2050	249	155
65°	550	147	72
70°	0	45	45
75°	0	0	59
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5535 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	8.1
10°-20°	195.1	20.8
20°-30°	243.2	25.9
30°-40°	217.5	23.2
40°-50°	137.2	14.6
50°-60°	57.4	6.1
60°-70°	10.8	1.2
70°-80°	0.4	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°	514.0	54.8
0°-40°	731.4	78.0
0°-60°	926.1	98.8
0°-90°	937.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	937.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	821	821	821	821	821	
5°	816	815	802	804	803	77
15°	759	741	689	660	649	213
25°	642	590	517	472	451	294
35°	493	422	332	272	247	307
45°	333	259	164	87	57	257
55°	165	114	33	13	13	148
65°	20	14	5	3	3	28
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°	821.4	821.4	821.4	821.4	821.4
2.5°	820.0	821.4	813.4	821.4	822.7
5°	816.1	814.8	801.5	804.2	802.9
7.5°	808.1	804.2	780.4	775.1	772.4
10°	797.6	787.0	755.2	742.0	736.7
12.5°	780.4	765.8	724.8	703.7	695.7
15°	759.2	740.7	689.1	660.0	649.4
17.5°	734.1	707.6	649.4	617.7	601.8
20°	706.3	669.3	607.1	568.7	552.9
22.5°	673.2	632.2	562.1	521.1	503.9
25°	641.5	589.9	517.2	472.2	451.0
27.5°	601.8	547.6	469.5	423.2	400.8
30°	568.7	506.6	424.6	373.0	351.8
32.5°	529.1	464.3	378.3	321.4	301.6
35°	493.3	421.9	332.0	272.5	247.3
37.5°	455.0	380.9	285.7	223.5	199.7
40°	414.0	339.9	243.4	174.6	148.1
42.5°	377.0	298.9	201.0	129.6	103.2
45°	333.3	259.2	164.0	87.3	56.9
47.5°	293.6	222.2	124.3	48.9	30.4
50°	251.3	183.8	88.6	25.1	19.8
52.5°	207.7	146.8	58.2	17.2	15.9
55°	165.3	113.7	33.1	13.2	13.2
57.5°	124.3	82.0	17.2	10.6	9.3
60°	87.3	54.2	10.6	7.9	6.6
62.5°	50.3	31.7	7.9	5.3	5.3
65°	19.8	14.5	5.3	2.6	2.6
67.5°	1.3	4.0	2.6	1.3	1.3
70°	0.0	0.0	1.3	1.3	1.3
72.5°	0.0	0.0	1.3	1.3	1.3
75°	0.0	0.0	0.0	0.0	1.3
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	13.06	14.24	13.43	14.55	14.87	0.00	0.00	0.00	0.00	0.00
	3H	12.90	13.94	13.29	14.27	14.63	0.00	0.00	0.00	0.00	0.00
	4H	12.82	13.77	13.22	14.13	14.51	0.00	0.00	0.00	0.00	0.00
	6H	12.73	13.60	13.14	13.97	14.37	0.00	0.00	0.00	0.00	0.00
	8H	12.68	13.50	13.11	13.89	14.30	0.00	0.00	0.00	0.00	0.00
	12H	12.63	13.41	13.06	13.79	14.22	0.00	0.00	0.00	0.00	0.00
4H	2H	12.82	13.78	13.23	14.13	14.52	0.00	0.00	0.00	0.00	0.01
	3H	12.66	13.43	13.07	13.83	14.24	0.00	0.00	0.00	0.00	0.00
	4H	12.55	13.24	12.99	13.66	14.10	0.00	0.00	0.00	0.00	0.00
	6H	12.46	13.04	12.92	13.49	13.96	0.00	0.00	0.00	0.00	0.00
	8H	12.39	12.94	12.87	13.39	13.86	0.00	0.00	0.00	0.00	0.00
	12H	12.34	12.81	12.82	13.30	13.77	0.00	0.00	0.00	0.00	0.00
8H	4H	12.39	12.94	12.87	13.39	13.86	0.00	0.00	0.00	0.00	0.00
	6H	12.28	12.72	12.78	13.22	13.70	0.00	0.00	0.00	0.00	0.00
	8H	12.20	12.60	12.73	13.12	13.61	0.00	0.00	0.00	0.00	0.00
	12H	12.15	12.50	12.67	13.00	13.57	0.00	0.00	0.00	0.00	0.00
12H	4H	12.34	12.81	12.82	13.30	13.77	0.00	0.00	0.00	0.00	0.00
	6H	12.20	12.60	12.73	13.12	13.61	0.00	0.00	0.00	0.00	0.00
	8H	12.15	12.50	12.67	13.00	13.57	0.00	0.00	0.00	0.00	0.00