

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: P1059439

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059439
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-H1000D850-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

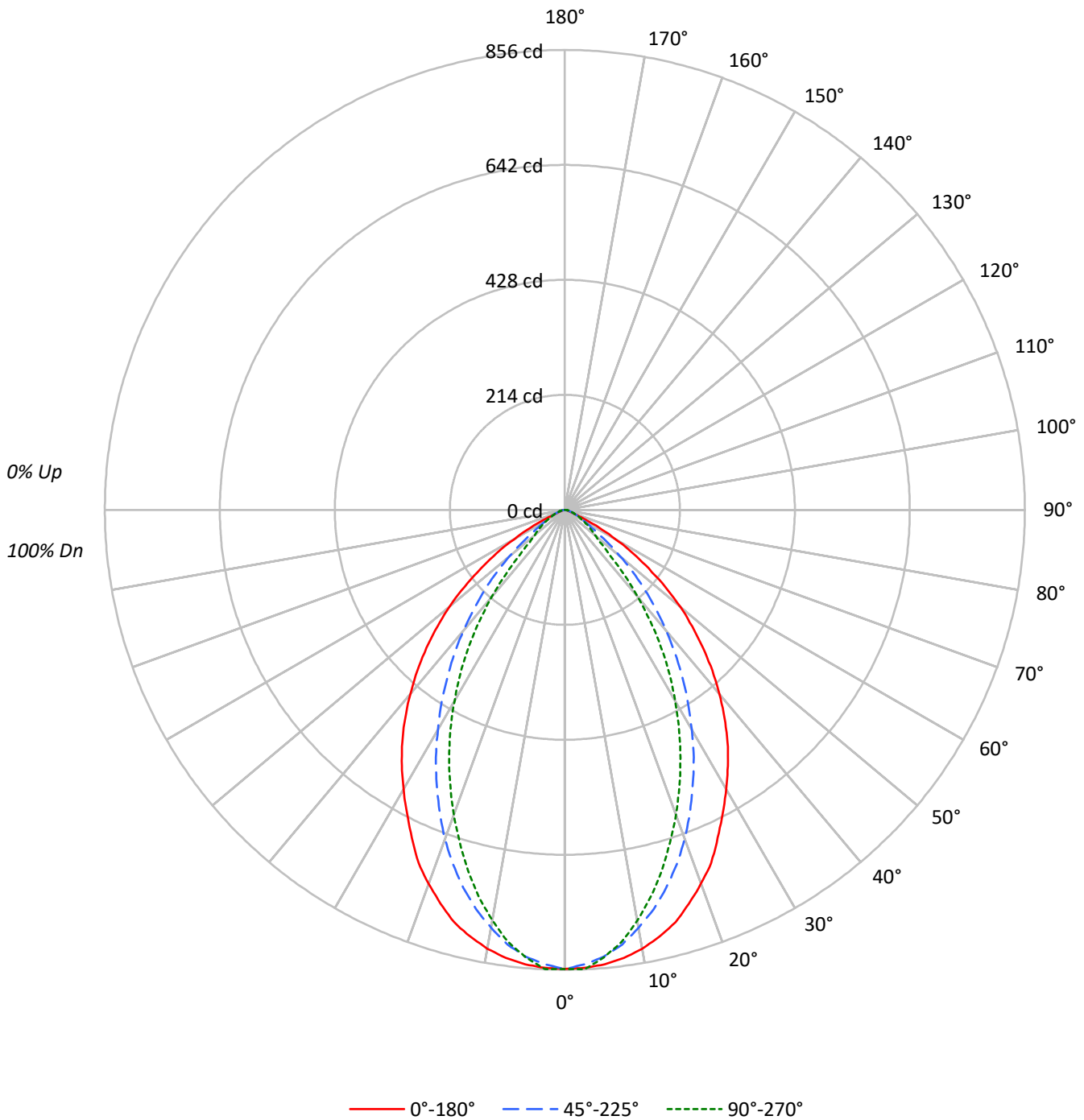
Lumens per Lamp: N/A
Luminaire Lumens: 1103.1 lumens
Efficiency: N/A
Efficacy: 35.4 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				82
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73				73
4	92	83	76	71	90	82	75	70	79	74	70	77	73	69	75	71	68	66				66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55				55
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				46
9	67	56	49	45	66	56	49	44	55	48	44	54	48	44	53	48	44	42				42
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10034	10034	10034
5°	10010	9839	9854
10°	9889	9416	9259
15°	9665	8860	8459
20°	9256	8149	7554
25°	8724	7301	6599
30°	8142	6403	5561
35°	7566	5462	4475
40°	6853	4502	3244
45°	6041	3492	1955
50°	5122	2441	1330
55°	3900	1462	1110
60°	2548	932	869
65°	1067	697	697
70°	364	501	546
75°	299	358	422
80°	176	270	358
85°	175	175	350

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6041 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.9	7.2
10°-20°	206.5	18.7
20°-30°	264.9	24.0
30°-40°	248.5	22.5
40°-50°	173.4	15.7
50°-60°	89.7	8.1
60°-70°	30.6	2.8
70°-80°	8.8	0.8
80°-90°	1.8	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°	550.3	49.9
0°-40°	798.8	72.4
0°-60°	1061.9	96.3
0°-90°	1103.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1103.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	854	854	854	854	854	
5°	849	848	835	839	836	80
15°	795	775	729	705	696	223
25°	673	631	564	525	509	310
35°	528	463	381	332	312	329
45°	364	298	210	146	118	280
55°	190	143	71	56	54	172
65°	38	33	25	24	25	45
75°	7	7	8	9	9	7
85°	1	1	1	1	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	854.5	854.5	854.5	854.5	854.5
2.5°	853.2	854.5	846.6	854.5	855.8
5°	849.2	847.9	834.7	838.6	836.0
7.5°	841.3	837.3	816.1	810.8	810.8
10°	829.4	821.4	789.7	780.4	776.5
12.5°	813.5	802.9	761.9	744.7	738.1
15°	795.0	775.1	728.8	705.0	695.8
17.5°	768.5	742.1	691.8	664.0	649.5
20°	740.7	707.7	652.1	619.0	604.5
22.5°	711.6	672.0	608.5	572.8	556.9
25°	673.3	631.0	563.5	525.1	509.3
27.5°	636.2	591.3	519.8	476.2	460.3
30°	600.5	547.6	472.2	429.9	410.1
32.5°	564.8	505.3	427.2	381.0	362.4
35°	527.8	463.0	381.0	332.0	312.2
37.5°	488.1	422.0	337.3	284.4	260.6
40°	447.1	378.3	293.7	234.1	211.6
42.5°	406.1	338.6	250.0	189.2	162.7
45°	363.8	297.6	210.3	145.5	117.7
47.5°	321.4	256.6	172.0	105.8	88.6
50°	280.4	218.3	133.6	78.0	72.8
52.5°	235.5	181.2	100.5	64.8	63.5
55°	190.5	142.9	71.4	55.6	54.2
57.5°	150.8	111.1	51.6	46.3	45.0
60°	108.5	79.4	39.7	38.4	37.0
62.5°	71.4	54.2	31.7	30.4	30.4
65°	38.4	33.1	25.1	23.8	25.1
67.5°	15.9	18.5	18.5	19.8	19.8
70°	10.6	11.9	14.6	15.9	15.9
72.5°	7.9	9.3	10.6	11.9	11.9
75°	6.6	6.6	7.9	9.3	9.3
77.5°	4.0	5.3	5.3	6.6	7.9
80°	2.6	4.0	4.0	5.3	5.3
82.5°	1.3	2.6	2.6	4.0	4.0
85°	1.3	1.3	1.3	1.3	2.6
87.5°	0.0	0.0	0.0	0.0	1.3
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	14.34	15.60	14.71	15.92	16.23	7.85	9.11	8.22	9.42	9.74
	3H	14.30	15.41	14.68	15.74	16.10	8.62	9.73	9.00	10.06	10.43
	4H	14.24	15.27	14.65	15.63	16.01	8.83	9.86	9.23	10.21	10.59
	6H	14.17	15.12	14.59	15.49	15.88	8.97	9.91	9.39	10.29	10.68
	8H	14.13	15.02	14.56	15.41	15.82	9.01	9.90	9.44	10.29	10.70
	12H	14.09	14.94	14.52	15.32	15.75	9.02	9.88	9.46	10.26	10.69
4H	2H	14.19	15.22	14.59	15.57	15.96	8.11	9.14	8.51	9.49	9.87
	3H	14.18	15.01	14.59	15.42	15.82	9.01	9.85	9.43	10.25	10.66
	4H	14.12	14.87	14.56	15.29	15.73	9.29	10.03	9.72	10.45	10.90
	6H	14.07	14.70	14.53	15.15	15.62	9.50	10.14	9.97	10.59	11.06
	8H	14.01	14.61	14.49	15.06	15.53	9.57	10.16	10.04	10.61	11.08
	12H	13.97	14.49	14.46	14.98	15.45	9.60	10.13	10.09	10.61	11.09
8H	4H	14.01	14.61	14.48	15.05	15.53	9.27	9.87	9.74	10.32	10.79
	6H	13.95	14.43	14.45	14.93	15.41	9.54	10.02	10.05	10.52	11.01
	8H	13.90	14.33	14.42	14.85	15.34	9.65	10.09	10.17	10.60	11.10
	12H	13.86	14.24	14.38	14.74	15.31	9.72	10.11	10.24	10.60	11.18
12H	4H	13.96	14.49	14.45	14.97	15.45	9.24	9.76	9.72	10.24	10.72
	6H	13.89	14.33	14.42	14.84	15.34	9.50	9.94	10.03	10.45	10.95
	8H	13.86	14.24	14.38	14.74	15.31	9.64	10.03	10.16	10.52	11.10