

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: P1059442

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059442
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D850-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

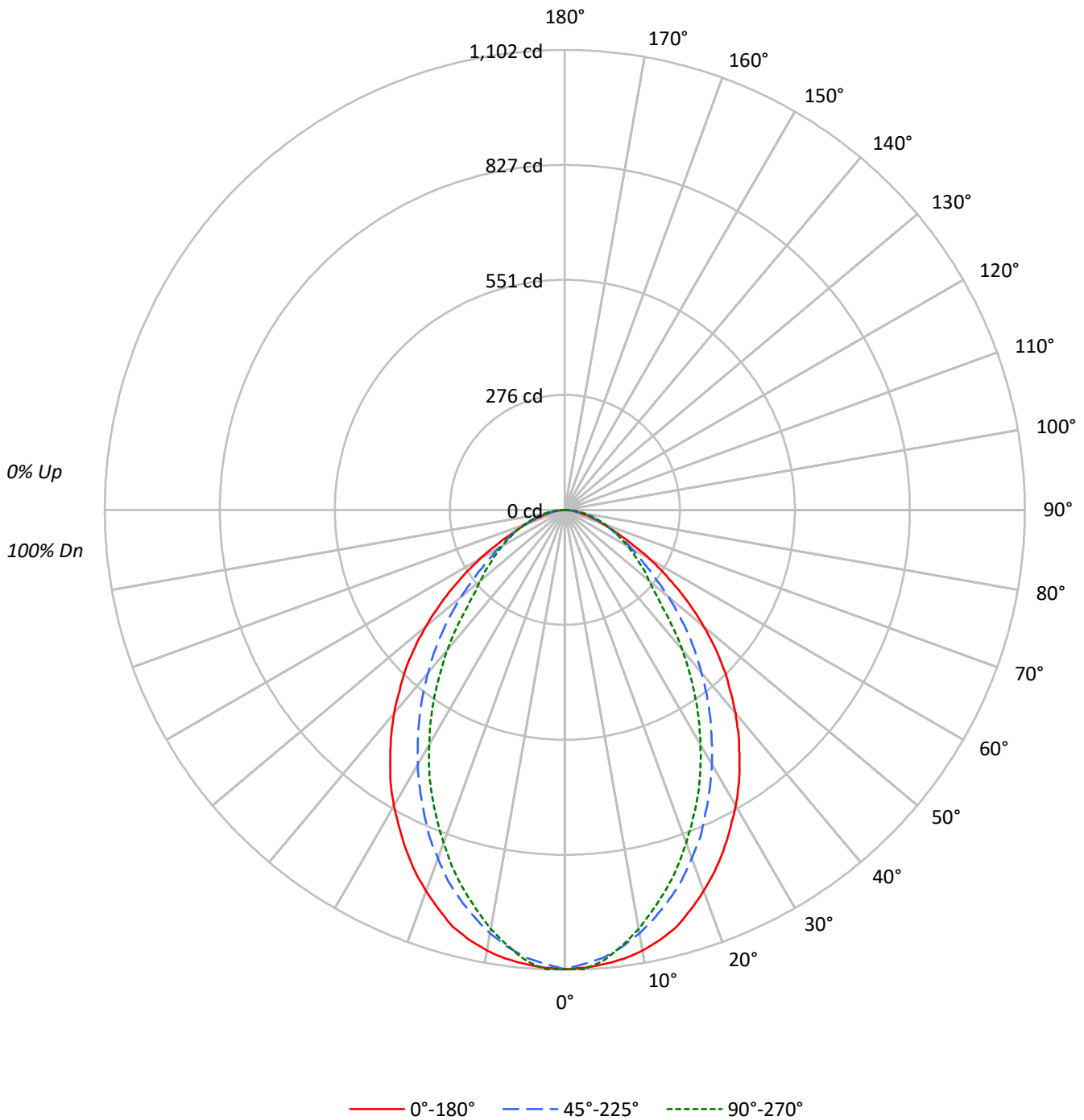
Lumens per Lamp: N/A
Luminaire Lumens: 1924.8 lumens
Efficiency: N/A
Efficacy: 61.7 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059442

CATALOG NUMBER: S123RDR-H1000D850-X4F0-XX-UDD-WVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1059442

CATALOG NUMBER: S123RDR-H1000D850-X4F0-XX-UDD-WVL-B

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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12923	12923	12923
5°	12879	12691	12769
10°	12790	12286	12160
15°	12575	11754	11433
20°	12149	11108	10612
25°	11654	10351	9769
30°	11102	9559	8807
35°	10447	8703	7792
40°	9752	7807	6711
45°	8941	6897	5513
50°	7926	5921	4784
55°	6744	4956	4387
60°	5498	4319	4070
65°	4190	3823	3784
70°	3268	3406	3543
75°	2640	3062	3303
80°	1968	2502	3043
85°	1064	1603	2668

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8941 cd/sqm



TEST NUMBER: P1059442

CATALOG NUMBER: S123RDR-H1000D850-X4F0-XX-UDD-WVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	5.3
10°-20°	274.8	14.3
20°-30°	373.7	19.4
30°-40°	387.3	20.1
40°-50°	326.7	17.0
50°-60°	231.9	12.0
60°-70°	141.7	7.4
70°-80°	70.5	3.7
80°-90°	16.0	0.8
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°	750.7	39.0
0°-40°	1138.0	59.1
0°-60°	1696.6	88.1
0°-90°	1924.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1924.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1100	1100	1100	1100	1100	
5°	1093	1093	1077	1083	1083	104
15°	1034	1014	967	950	940	290
25°	900	860	799	770	754	413
35°	729	673	607	565	544	456
45°	538	482	415	358	332	413
55°	329	295	242	221	214	296
65°	151	146	138	138	136	154
75°	58	62	68	70	73	63
85°	8	9	12	17	20	11
90°	0	0	0	0	0	



TEST NUMBER: P1059442

CATALOG NUMBER: S123RDR-H1000D850-X4F0-XX-UDD-WVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1100.5	1100.5	1100.5	1100.5	1100.5
2.5°	1097.9	1099.2	1088.6	1100.5	1101.8
5°	1092.6	1092.6	1076.7	1083.3	1083.3
7.5°	1084.6	1082.0	1055.5	1055.5	1052.9
10°	1072.7	1064.8	1030.4	1023.8	1019.8
12.5°	1055.5	1042.3	1000.0	988.1	980.1
15°	1034.4	1014.5	966.9	949.7	940.5
17.5°	1004.0	984.1	931.2	907.4	896.8
20°	972.2	943.1	888.9	865.1	849.2
22.5°	937.8	900.8	847.9	818.8	801.6
25°	899.5	859.8	798.9	769.8	754.0
27.5°	858.5	814.8	752.6	719.6	703.7
30°	818.8	768.5	705.0	668.0	649.5
32.5°	776.4	719.6	654.8	616.4	597.9
35°	728.8	673.3	607.1	564.8	543.6
37.5°	683.9	627.0	558.2	513.2	489.4
40°	636.2	579.4	509.3	463.0	437.8
42.5°	586.0	531.7	463.0	408.7	384.9
45°	538.4	481.5	415.3	358.5	332.0
47.5°	486.8	433.9	369.0	310.8	292.3
50°	433.9	384.9	324.1	271.2	261.9
52.5°	382.3	341.3	279.1	244.7	240.7
55°	329.4	295.0	242.1	220.9	214.3
57.5°	280.4	255.3	207.7	197.1	194.4
60°	234.1	213.0	183.9	177.2	173.3
62.5°	189.2	177.2	160.1	157.4	154.8
65°	150.8	145.5	137.6	137.6	136.2
67.5°	119.0	119.0	117.7	120.4	119.0
70°	95.2	96.6	99.2	101.9	103.2
72.5°	75.4	79.4	82.0	86.0	87.3
75°	58.2	62.2	67.5	70.1	72.8
77.5°	42.3	46.3	51.6	55.6	58.2
80°	29.1	31.7	37.0	42.3	45.0
82.5°	18.5	19.8	23.8	29.1	31.7
85°	7.9	9.3	11.9	17.2	19.8
87.5°	0.0	0.0	1.3	5.3	9.3
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059442
 CATALOG NUMBER: S123RDR-H1000D850-X4F0-XX-UDD-WVL-B

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	17.70	19.15	18.07	19.46	19.78	15.80	17.25	16.16	17.56	17.87
	3H	18.60	19.89	18.98	20.22	20.58	17.37	18.67	17.75	18.99	19.36
	4H	18.88	20.09	19.28	20.44	20.82	17.97	19.18	18.37	19.53	19.91
	6H	19.03	20.15	19.44	20.51	20.91	18.42	19.53	18.83	19.90	20.29
	8H	19.05	20.11	19.48	20.50	20.91	18.57	19.63	18.99	20.02	20.42
	12H	19.05	20.06	19.48	20.44	20.87	18.66	19.68	19.10	20.06	20.49
4H	2H	17.94	19.16	18.34	19.51	19.89	16.34	17.55	16.74	17.90	18.28
	3H	19.06	20.06	19.47	20.46	20.86	18.11	19.11	18.52	19.51	19.92
	4H	19.45	20.35	19.88	20.76	21.20	18.82	19.72	19.26	20.14	20.58
	6H	19.69	20.47	20.15	20.91	21.37	19.40	20.17	19.86	20.62	21.08
	8H	19.73	20.46	20.20	20.90	21.37	19.59	20.31	20.05	20.76	21.23
	12H	19.74	20.39	20.22	20.87	21.34	19.73	20.37	20.21	20.85	21.33
8H	4H	19.61	20.33	20.07	20.78	21.25	19.03	19.76	19.50	20.21	20.68
	6H	19.92	20.52	20.42	21.01	21.49	19.71	20.31	20.21	20.80	21.28
	8H	19.99	20.53	20.51	21.04	21.53	19.97	20.50	20.48	21.02	21.50
	12H	20.03	20.50	20.54	21.00	21.56	20.17	20.65	20.69	21.14	21.71
12H	4H	19.61	20.26	20.09	20.74	21.21	19.03	19.68	19.52	20.16	20.63
	6H	19.93	20.47	20.45	20.98	21.47	19.72	20.26	20.23	20.77	21.26
	8H	20.05	20.52	20.56	21.01	21.58	20.02	20.50	20.53	20.99	21.56