

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: P1059681

Luminaire Tested: S123RDR-H560D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059681
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D850-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE 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

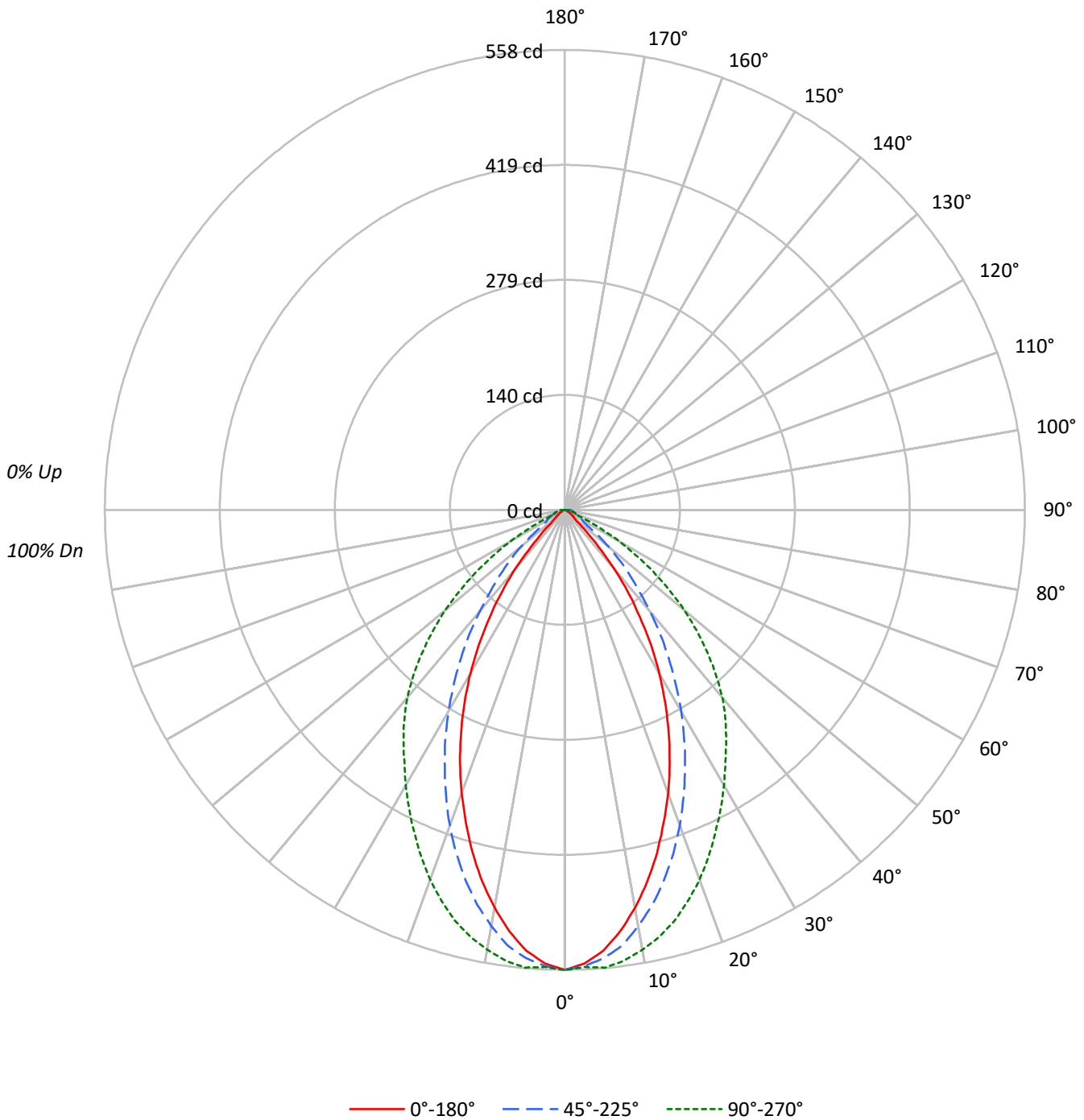
Lumens per Lamp: N/A
Luminaire Lumens: 670.1 lumens
Efficiency: N/A
Efficacy: 38.5 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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: P1059681

CATALOG NUMBER: S123RDR-H560D850-X4F0-XX-UDD-BVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1059681

CATALOG NUMBER: S123RDR-H560D850-X4F0-XX-UDD-BVL-W

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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90			90	
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81			81	
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73			73	
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66			66	
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60			60	
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55			55	
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50			50	
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47			47	
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43			43	
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40			40	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6555	6555	6555
5°	6329	6432	6571
10°	5843	6113	6464
15°	5243	5653	6269
20°	4574	5096	5967
25°	3858	4466	5597
30°	3104	3820	5231
35°	2271	3144	4890
40°	1416	2451	4554
45°	536	1827	4057
50°	254	1259	3456
55°	194	690	2674
60°	139	585	1757
65°	103	508	734
70°	100	477	477
75°	132	499	499
80°	196	595	548
85°	391	984	795

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4057 cd/sqm



TEST NUMBER: P1059681

CATALOG NUMBER: S123RDR-H560D850-X4F0-XX-UDD-BVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.2	7.6
10°-20°	131.4	19.6
20°-30°	162.6	24.3
30°-40°	145.8	21.8
40°-50°	95.6	14.3
50°-60°	47.8	7.1
60°-70°	18.6	2.8
70°-80°	10.5	1.6
80°-90°	6.5	1.0
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°	345.3	51.5
0°-40°	491.1	73.3
0°-60°	634.5	94.7
0°-90°	670.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	670.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	537	546	546	552	558	50
15°	431	449	465	496	516	120
25°	298	316	345	394	432	136
35°	158	180	219	285	341	99
45°	32	52	110	188	244	31
55°	10	12	34	92	131	9
65°	4	11	18	24	26	4
75°	3	11	11	11	11	3
85°	3	7	7	7	6	3
90°	0	0	0	0	0	

TEST NUMBER: P1059681

CATALOG NUMBER: S123RDR-H560D850-X4F0-XX-UDD-BVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	558.2	558.2	558.2	558.2	558.2
2.5°	550.9	558.9	553.8	554.5	555.3
5°	536.9	545.7	545.7	551.6	557.5
7.5°	515.7	525.9	533.3	543.5	551.6
10°	490.0	502.4	512.7	531.1	542.1
12.5°	462.1	477.5	490.7	514.9	530.3
15°	431.3	448.9	465.0	495.8	515.7
17.5°	398.3	415.9	437.2	473.1	497.3
20°	366.0	383.6	407.8	448.2	477.5
22.5°	332.3	350.6	376.3	421.0	455.5
25°	297.8	316.1	344.7	393.9	432.0
27.5°	263.3	281.7	313.9	367.5	409.3
30°	228.9	247.2	281.7	338.9	385.8
32.5°	194.4	214.2	250.1	312.5	362.3
35°	158.4	179.7	219.3	285.3	341.1
37.5°	125.4	145.2	190.0	261.9	319.8
40°	92.4	113.7	159.9	239.1	297.1
42.5°	60.1	82.9	132.8	214.2	271.4
45°	32.3	52.1	110.0	188.5	244.3
47.5°	17.6	28.6	88.8	161.4	216.4
50°	13.9	16.1	68.9	137.9	189.2
52.5°	11.7	13.2	49.1	115.9	159.2
55°	9.5	11.7	33.7	92.4	130.6
57.5°	8.1	10.3	26.4	71.9	102.0
60°	5.9	8.8	24.9	52.8	74.8
62.5°	4.4	9.5	22.0	36.7	49.1
65°	3.7	11.0	18.3	24.2	26.4
67.5°	2.9	11.7	16.1	15.4	15.4
70°	2.9	11.0	13.9	13.2	13.9
72.5°	2.9	11.7	12.5	11.7	12.5
75°	2.9	11.0	11.0	11.0	11.0
77.5°	2.9	10.3	10.3	9.5	9.5
80°	2.9	8.8	8.8	8.8	8.1
82.5°	2.9	8.1	8.1	8.1	6.6
85°	2.9	7.3	7.3	7.3	5.9
87.5°	2.2	6.6	7.3	6.6	4.4
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1059681

CATALOG NUMBER: S123RDR-H560D850-X4F0-XX-UDD-BVL-W

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	0.00	0.17	0.00	0.48	0.79	13.14	14.39	13.50	14.71	15.02
	3H	1.22	2.33	1.60	2.66	3.02	13.22	14.33	13.60	14.66	15.03
	4H	2.31	3.35	2.72	3.70	4.08	13.30	14.33	13.70	14.68	15.07
	6H	3.30	4.25	3.71	4.62	5.01	13.40	14.35	13.82	14.72	15.11
	8H	3.78	4.67	4.21	5.07	5.47	13.46	14.36	13.89	14.75	15.15
	12H	4.33	5.19	4.76	5.57	6.00	13.54	14.40	13.97	14.78	15.21
4H	2H	2.14	3.17	2.54	3.52	3.91	12.99	14.03	13.40	14.38	14.76
	3H	4.45	5.29	4.86	5.70	6.10	13.17	14.01	13.58	14.42	14.82
	4H	5.82	6.58	6.26	7.00	7.44	13.32	14.07	13.76	14.50	14.94
	6H	6.91	7.56	7.37	8.01	8.47	13.54	14.20	14.01	14.64	15.11
	8H	7.36	7.97	7.83	8.42	8.89	13.67	14.28	14.14	14.73	15.20
	12H	7.85	8.39	8.34	8.87	9.35	13.84	14.38	14.33	14.87	15.34
8H	4H	6.80	7.41	7.27	7.86	8.33	13.32	13.93	13.79	14.37	14.85
	6H	8.32	8.82	8.82	9.32	9.80	13.65	14.15	14.16	14.65	15.13
	8H	9.10	9.54	9.62	10.06	10.55	13.89	14.34	14.41	14.85	15.35
	12H	9.89	10.29	10.41	10.79	11.36	14.22	14.62	14.74	15.12	15.69
12H	4H	6.97	7.51	7.46	8.00	8.47	13.30	13.84	13.79	14.32	14.80
	6H	8.64	9.09	9.16	9.60	10.10	13.67	14.12	14.20	14.64	15.13
	8H	9.59	9.99	10.11	10.49	11.06	13.98	14.38	14.50	14.88	15.45