

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: P1059682

Luminaire Tested: S123RDR-H560D850-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059682
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-H560D850-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

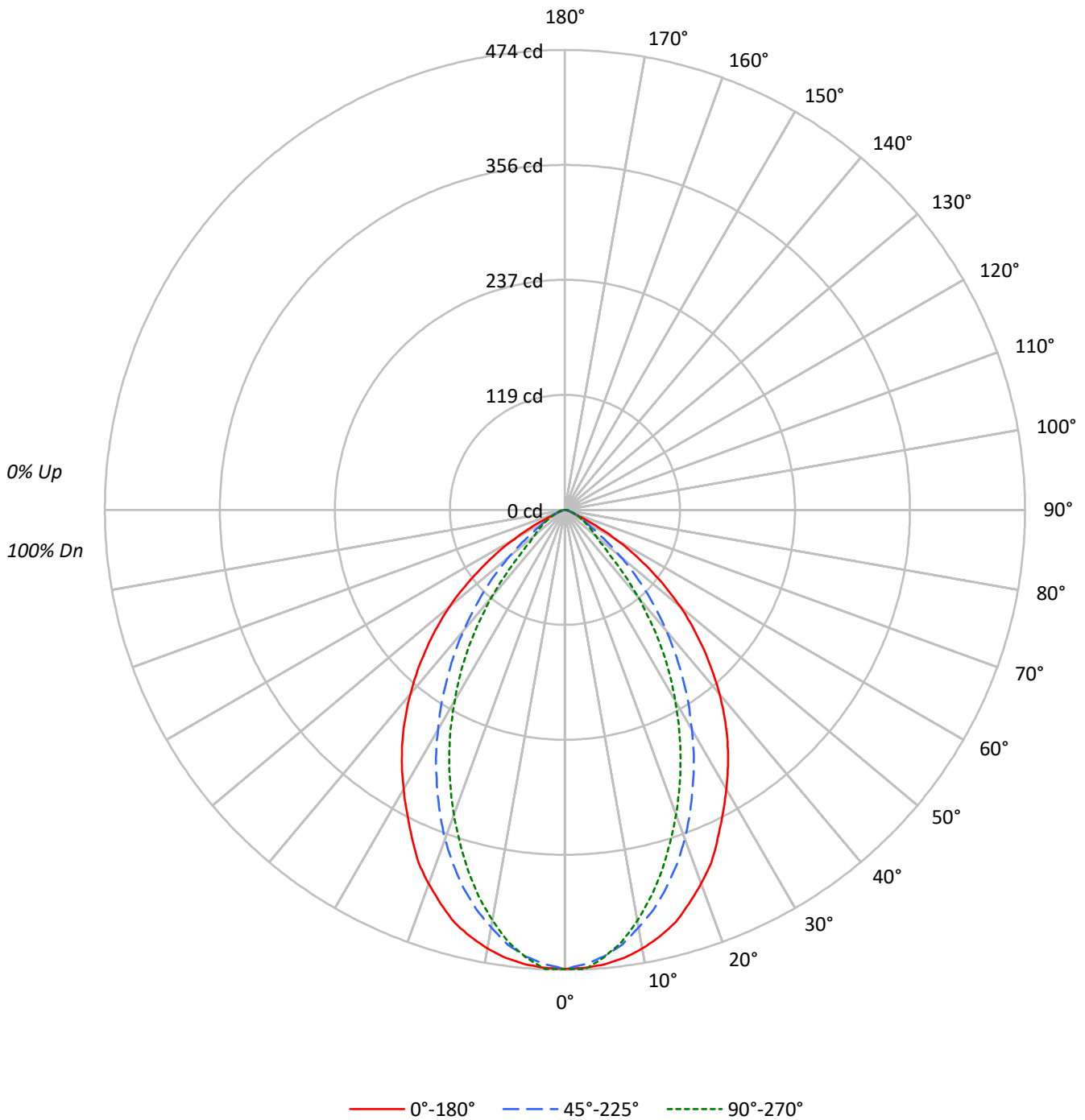
Lumens per Lamp: N/A
Luminaire Lumens: 610.8 lumens
Efficiency: N/A
Efficacy: 35.1 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P1059682

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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°	5555	5555	5555
5°	5542	5447	5456
10°	5475	5213	5126
15°	5351	4905	4683
20°	5125	4512	4182
25°	4830	4042	3654
30°	4508	3546	3078
35°	4189	3023	2477
40°	3794	2492	1797
45°	3345	1933	1083
50°	2837	1352	736
55°	2160	809	614
60°	1411	517	481
65°	589	386	386
70°	203	278	302
75°	168	200	231
80°	101	149	196
85°	94	94	202

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3345 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	7.2
10°-20°	114.4	18.7
20°-30°	146.6	24.0
30°-40°	137.6	22.5
40°-50°	96.0	15.7
50°-60°	49.6	8.1
60°-70°	17.0	2.8
70°-80°	4.9	0.8
80°-90°	1.0	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°	304.7	49.9
0°-40°	442.3	72.4
0°-60°	587.9	96.3
0°-90°	610.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	610.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	473	473	473	473	473	
5°	470	470	462	464	463	45
15°	440	429	404	390	385	123
25°	373	349	312	291	282	171
35°	292	256	211	184	173	182
45°	201	165	116	81	65	155
55°	106	79	40	31	30	95
65°	21	18	14	13	14	25
75°	4	4	4	5	5	4
85°	1	1	1	1	2	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	473.1	473.1	473.1	473.1	473.1
2.5°	472.4	473.1	468.7	473.1	473.8
5°	470.2	469.5	462.1	464.3	462.9
7.5°	465.8	463.6	451.9	448.9	448.9
10°	459.2	454.8	437.2	432.1	429.9
12.5°	450.4	444.5	421.8	412.3	408.7
15°	440.2	429.2	403.5	390.4	385.2
17.5°	425.5	410.9	383.0	367.7	359.6
20°	410.1	391.8	361.1	342.7	334.7
22.5°	394.0	372.0	336.9	317.1	308.3
25°	372.8	349.3	312.0	290.8	282.0
27.5°	352.3	327.4	287.8	263.7	254.9
30°	332.5	303.2	261.5	238.0	227.0
32.5°	312.7	279.8	236.6	210.9	200.7
35°	292.2	256.3	210.9	183.8	172.8
37.5°	270.2	233.6	186.8	157.5	144.3
40°	247.5	209.5	162.6	129.6	117.2
42.5°	224.8	187.5	138.4	104.7	90.1
45°	201.4	164.8	116.4	80.6	65.2
47.5°	178.0	142.1	95.2	58.6	49.1
50°	155.3	120.8	74.0	43.2	40.3
52.5°	130.4	100.3	55.7	35.9	35.2
55°	105.5	79.1	39.5	30.8	30.0
57.5°	83.5	61.5	28.6	25.6	24.9
60°	60.1	43.9	22.0	21.2	20.5
62.5°	39.5	30.0	17.6	16.8	16.8
65°	21.2	18.3	13.9	13.2	13.9
67.5°	8.8	10.3	10.3	11.0	11.0
70°	5.9	6.6	8.1	8.8	8.8
72.5°	4.4	5.1	5.9	6.6	6.6
75°	3.7	3.7	4.4	5.1	5.1
77.5°	2.2	2.9	2.9	3.7	4.4
80°	1.5	2.2	2.2	2.9	2.9
82.5°	0.7	1.5	1.5	2.2	2.2
85°	0.7	0.7	0.7	0.7	1.5
87.5°	0.0	0.0	0.0	0.0	0.7
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	12.29	13.55	12.65	13.86	14.18	5.79	7.05	6.15	7.36	7.68
	3H	12.24	13.35	12.62	13.68	14.05	6.57	7.68	6.95	8.01	8.37
	4H	12.19	13.22	12.59	13.57	13.96	6.77	7.80	7.17	8.15	8.53
	6H	12.12	13.06	12.54	13.43	13.83	6.91	7.85	7.33	8.23	8.62
	8H	12.08	12.97	12.51	13.36	13.77	6.95	7.84	7.38	8.23	8.64
	12H	12.03	12.89	12.47	13.27	13.70	6.97	7.82	7.40	8.20	8.63
4H	2H	12.14	13.16	12.54	13.52	13.90	6.05	7.08	6.45	7.43	7.81
	3H	12.12	12.96	12.54	13.36	13.77	6.96	7.79	7.37	8.20	8.60
	4H	12.07	12.81	12.51	13.23	13.68	7.23	7.97	7.66	8.39	8.84
	6H	12.01	12.65	12.48	13.10	13.57	7.44	8.08	7.91	8.53	9.00
	8H	11.96	12.56	12.43	13.00	13.48	7.51	8.10	7.98	8.55	9.02
	12H	11.92	12.44	12.40	12.92	13.40	7.55	8.07	8.03	8.55	9.03
8H	4H	11.96	12.55	12.43	13.00	13.47	7.21	7.81	7.68	8.26	8.73
	6H	11.89	12.38	12.40	12.88	13.36	7.48	7.96	7.99	8.46	8.95
	8H	11.84	12.28	12.37	12.80	13.29	7.59	8.02	8.11	8.54	9.03
	12H	11.81	12.19	12.32	12.69	13.26	7.66	8.05	8.18	8.54	9.12
12H	4H	11.91	12.43	12.40	12.92	13.39	7.18	7.70	7.66	8.18	8.66
	6H	11.84	12.27	12.36	12.79	13.28	7.44	7.88	7.97	8.40	8.89
	8H	11.81	12.19	12.32	12.69	13.26	7.58	7.97	8.10	8.46	9.04