

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: P1059668

Luminaire Tested: S123RDR-H560D835-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059668
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D835-X4F0-XX-UDD-WVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

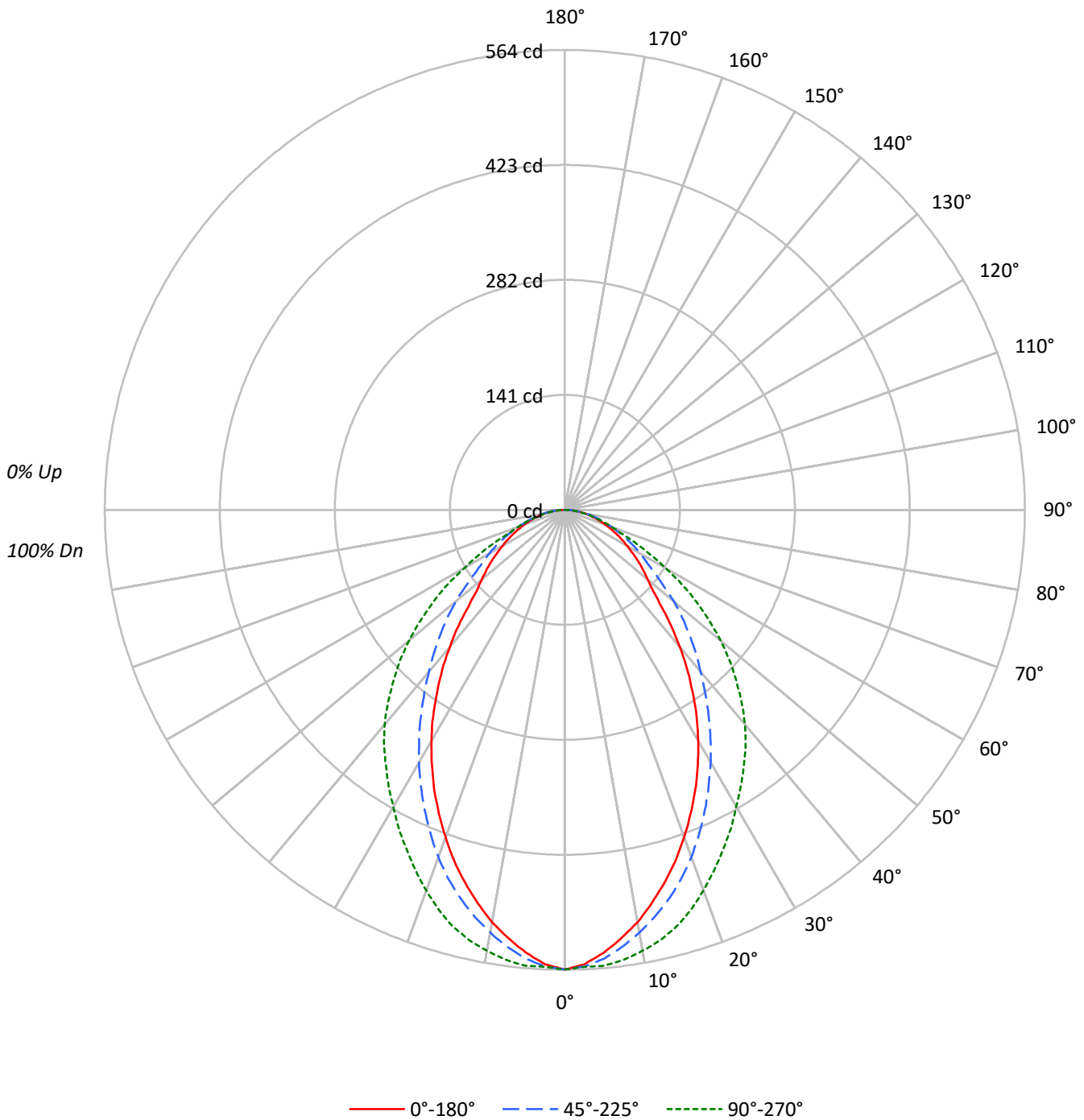
Lumens per Lamp: N/A
Luminaire Lumens: 1018.2 lumens
Efficiency: N/A
Efficacy: 58.5 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

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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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	53	51
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6618	6618	6618
5°	6425	6511	6613
10°	6122	6279	6547
15°	5751	6001	6435
20°	5342	5664	6209
25°	4905	5265	5950
30°	4435	4847	5699
35°	3912	4405	5485
40°	3363	3970	5267
45°	2765	3577	4939
50°	2426	3186	4551
55°	2246	2719	4031
60°	2064	2499	3337
65°	1928	2295	2626
70°	1816	2087	2087
75°	1710	1919	1797
80°	1609	1745	1521
85°	1509	1698	1159

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4939 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.1	5.1
10°-20°	139.7	13.7
20°-30°	189.4	18.6
30°-40°	198.1	19.5
40°-50°	171.8	16.9
50°-60°	127.8	12.6
60°-70°	82.0	8.1
70°-80°	44.0	4.3
80°-90°	13.3	1.3
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°	381.3	37.4
0°-40°	579.3	56.9
0°-60°	878.9	86.3
0°-90°	1018.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1018.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	564	564	564	564	564	
5°	545	554	552	556	561	51
15°	473	484	494	513	529	133
25°	379	390	406	434	459	174
35°	273	286	307	346	383	170
45°	166	179	215	262	297	131
55°	110	112	133	170	197	98
65°	69	75	83	88	94	69
75°	38	44	42	40	40	40
85°	11	14	13	11	9	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	563.6	563.6	563.6	563.6	563.6
2.5°	557.7	565.6	560.3	560.3	561.0
5°	545.1	554.4	552.4	556.4	561.0
7.5°	529.9	539.9	540.5	549.8	556.4
10°	513.4	523.3	526.6	539.9	549.1
12.5°	493.6	504.8	510.8	527.3	540.5
15°	473.1	484.4	493.6	513.4	529.3
17.5°	451.3	462.5	474.4	496.9	514.1
20°	427.5	439.4	453.3	475.8	496.9
22.5°	403.1	415.6	430.2	454.6	478.4
25°	378.6	390.5	406.4	433.5	459.2
27.5°	352.9	365.4	381.9	411.7	440.7
30°	327.1	339.6	357.5	389.2	420.3
32.5°	300.7	313.2	332.4	368.1	401.8
35°	272.9	286.1	307.3	346.2	382.6
37.5°	246.5	259.0	282.8	325.8	364.1
40°	219.4	232.6	259.0	305.3	343.6
42.5°	192.9	206.2	237.2	283.5	321.1
45°	166.5	179.1	215.4	261.7	297.4
47.5°	146.0	155.3	194.9	238.5	274.2
50°	132.8	136.1	174.4	216.1	249.1
52.5°	120.9	123.6	152.0	193.6	223.3
55°	109.7	112.3	132.8	170.5	196.9
57.5°	98.5	101.8	118.3	146.7	170.5
60°	87.9	91.8	106.4	125.5	142.1
62.5°	78.6	83.3	94.5	106.4	117.6
65°	69.4	75.3	82.6	87.9	94.5
67.5°	60.8	67.4	71.4	72.7	73.3
70°	52.9	59.5	60.8	60.8	60.8
72.5°	44.9	52.2	50.9	50.2	49.6
75°	37.7	43.6	42.3	40.3	39.6
77.5°	30.4	35.7	33.7	32.4	30.4
80°	23.8	27.8	25.8	24.4	22.5
82.5°	17.8	20.5	18.5	17.2	15.2
85°	11.2	13.9	12.6	10.6	8.6
87.5°	5.9	7.9	6.6	5.9	3.3
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	13.35	14.84	13.72	15.15	15.46	16.11	17.59	16.47	17.90	18.22
	3H	15.06	16.39	15.44	16.72	17.08	17.13	18.46	17.51	18.79	19.15
	4H	15.72	16.97	16.12	17.32	17.70	17.49	18.74	17.89	19.09	19.47
	6H	16.23	17.37	16.64	17.74	18.13	17.75	18.90	18.16	19.27	19.66
	8H	16.40	17.50	16.83	17.89	18.29	17.82	18.91	18.25	19.30	19.71
	12H	16.53	17.58	16.96	17.96	18.39	17.86	18.90	18.29	19.28	19.71
4H	2H	14.13	15.37	14.53	15.72	16.10	16.38	17.62	16.78	17.97	18.35
	3H	16.06	17.09	16.47	17.49	17.89	17.63	18.67	18.04	19.07	19.47
	4H	16.86	17.79	17.30	18.21	18.65	18.12	19.05	18.55	19.47	19.91
	6H	17.51	18.31	17.96	18.76	19.22	18.50	19.31	18.96	19.75	20.21
	8H	17.73	18.49	18.20	18.93	19.40	18.61	19.37	19.08	19.81	20.28
	12H	17.91	18.58	18.39	19.06	19.53	18.68	19.36	19.17	19.84	20.31
8H	4H	17.18	17.94	17.65	18.38	18.85	18.31	19.07	18.78	19.51	19.98
	6H	17.98	18.60	18.48	19.09	19.57	18.80	19.42	19.30	19.92	20.39
	8H	18.31	18.87	18.82	19.38	19.86	18.98	19.54	19.49	20.05	20.54
	12H	18.58	19.08	19.09	19.57	20.14	19.11	19.60	19.62	20.10	20.66
12H	4H	17.21	17.88	17.69	18.36	18.83	18.33	19.00	18.81	19.48	19.95
	6H	18.03	18.59	18.55	19.10	19.59	18.84	19.40	19.35	19.91	20.40
	8H	18.43	18.92	18.94	19.41	19.98	19.07	19.56	19.58	20.05	20.62