

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: P1059698

Luminaire Tested: S123RDR-H560D930-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059698
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H560D930-X4F0-XX-UDD-BVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

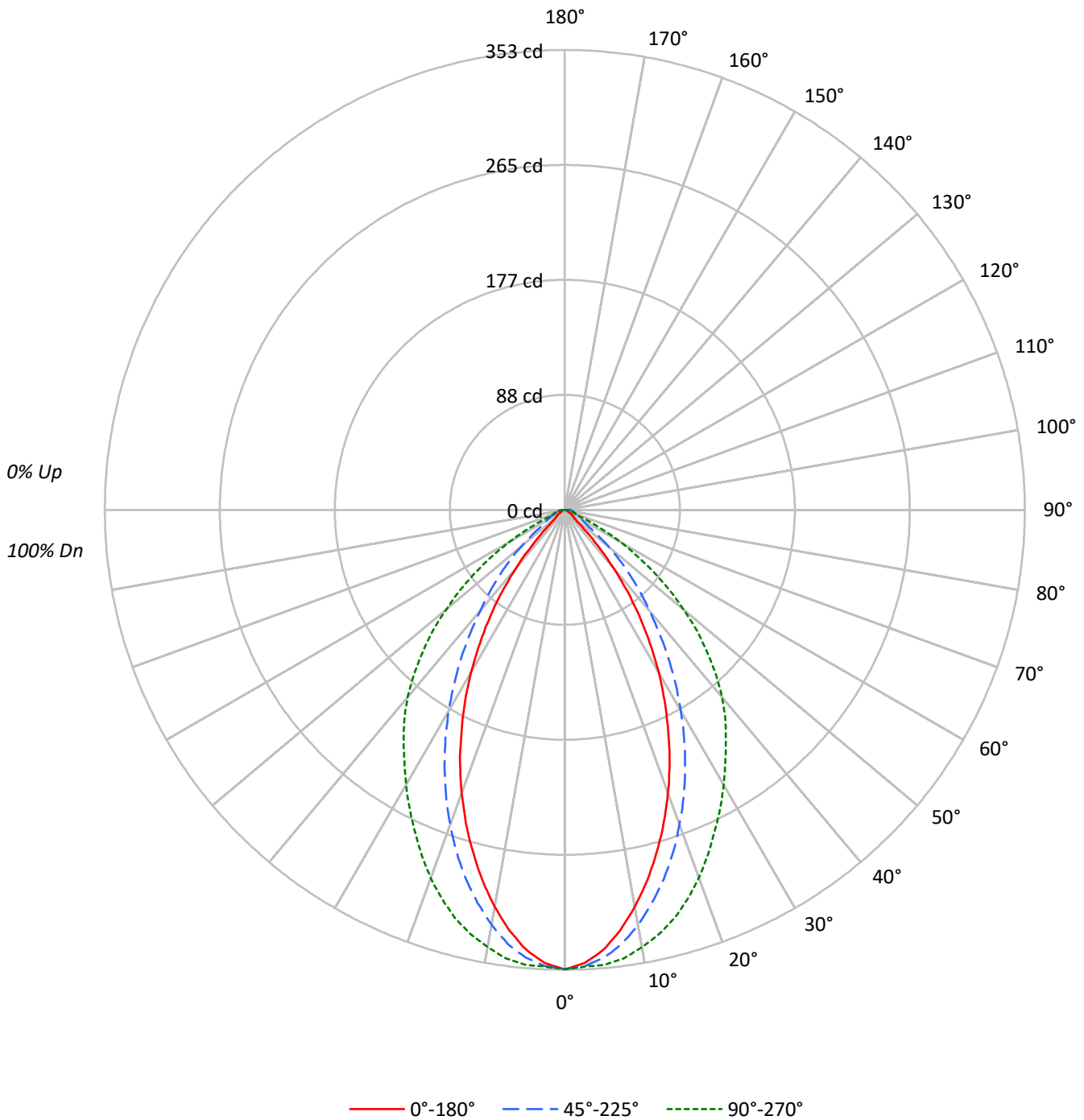
Lumens per Lamp: N/A
Luminaire Lumens: 423.5 lumens
Efficiency: N/A
Efficacy: 24.3 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

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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				
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4140	4140	4140
5°	3997	4067	4130
10°	3689	3857	4062
15°	3309	3566	3945
20°	2890	3213	3759
25°	2431	2828	3527
30°	1951	2412	3304
35°	1429	1985	3091
40°	884	1545	2876
45°	340	1164	2561
50°	168	798	2167
55°	133	442	1699
60°	89	366	1139
65°	75	331	508
70°	76	295	295
75°	100	318	295
80°	149	399	331
85°	216	660	431

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2561 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.3	7.6
10°-20°	82.8	19.5
20°-30°	102.7	24.3
30°-40°	92.0	21.7
40°-50°	60.5	14.3
50°-60°	30.3	7.2
60°-70°	12.0	2.8
70°-80°	6.7	1.6
80°-90°	4.2	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°	217.8	51.4
0°-40°	309.8	73.2
0°-60°	400.6	94.6
0°-90°	423.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	423.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	353	353	353	353	353	
5°	339	344	345	347	350	31
15°	272	281	293	313	324	76
25°	188	200	218	249	272	86
35°	100	113	138	181	216	62
45°	20	34	70	118	154	19
55°	6	8	22	58	83	6
65°	3	8	12	15	18	3
75°	2	7	7	6	6	2
85°	2	5	5	5	3	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	352.6	352.6	352.6	352.6	352.6
2.5°	348.3	353.1	350.4	350.4	350.9
5°	339.1	344.5	345.0	347.2	350.4
7.5°	325.6	332.6	335.9	342.3	347.2
10°	309.4	317.0	323.5	334.8	340.7
12.5°	291.6	299.2	308.9	324.5	333.7
15°	272.2	280.9	293.3	313.2	324.5
17.5°	252.3	260.9	276.0	298.7	313.2
20°	231.3	241.0	257.1	283.0	300.8
22.5°	210.2	221.0	238.3	266.3	286.8
25°	187.6	199.5	218.3	249.1	272.2
27.5°	166.0	178.4	198.4	231.8	258.2
30°	143.9	156.3	177.9	214.0	243.7
32.5°	121.3	135.3	158.0	197.3	229.1
35°	99.7	113.2	138.5	181.1	215.6
37.5°	78.7	92.2	118.6	165.5	202.2
40°	57.7	71.7	100.8	150.4	187.6
42.5°	37.7	52.3	85.2	135.3	171.4
45°	20.5	34.0	70.1	118.1	154.2
47.5°	11.3	18.3	56.6	101.9	137.5
50°	9.2	10.2	43.7	86.8	118.6
52.5°	7.5	8.6	31.3	72.2	101.3
55°	6.5	7.5	21.6	58.2	83.0
57.5°	5.4	6.5	17.3	44.7	65.2
60°	3.8	6.5	15.6	32.9	48.5
62.5°	3.2	6.5	13.5	22.6	32.3
65°	2.7	7.5	11.9	15.1	18.3
67.5°	2.2	7.5	10.2	9.7	9.7
70°	2.2	7.5	8.6	8.1	8.6
72.5°	2.2	8.1	8.1	7.5	7.5
75°	2.2	7.0	7.0	6.5	6.5
77.5°	2.2	6.5	6.5	5.9	5.9
80°	2.2	5.9	5.9	5.4	4.9
82.5°	2.2	5.4	5.4	4.9	4.3
85°	1.6	4.9	4.9	4.9	3.2
87.5°	1.6	4.3	4.9	4.3	2.7
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	0.00	0.00	0.00	0.00	0.00	11.48	12.73	11.84	13.05	13.36
	3H	0.00	1.04	0.31	1.37	1.74	11.56	12.67	11.94	13.00	13.36
	4H	1.11	2.14	1.51	2.49	2.88	11.62	12.65	12.02	13.01	13.39
	6H	2.17	3.12	2.59	3.49	3.89	11.72	12.67	12.13	13.04	13.43
	8H	2.72	3.62	3.15	4.01	4.42	11.78	12.68	12.21	13.07	13.48
	12H	3.20	4.06	3.63	4.44	4.87	11.85	12.71	12.28	13.09	13.52
4H	2H	0.68	1.72	1.08	2.07	2.45	11.34	12.37	11.74	12.72	13.11
	3H	3.12	3.97	3.54	4.37	4.78	11.51	12.36	11.92	12.76	13.17
	4H	4.47	5.23	4.91	5.65	6.09	11.64	12.40	12.08	12.82	13.26
	6H	5.61	6.26	6.07	6.71	7.18	11.86	12.51	12.32	12.96	13.43
	8H	6.13	6.74	6.60	7.18	7.66	11.98	12.59	12.45	13.04	13.51
	12H	6.58	7.12	7.07	7.61	8.08	12.14	12.68	12.63	13.17	13.64
8H	4H	5.39	6.00	5.86	6.45	6.92	11.64	12.25	12.11	12.70	13.17
	6H	6.99	7.49	7.49	7.98	8.47	11.97	12.48	12.48	12.97	13.45
	8H	7.82	8.27	8.34	8.79	9.28	12.21	12.66	12.73	13.17	13.67
	12H	8.60	9.00	9.12	9.50	10.07	12.53	12.93	13.05	13.43	14.00
12H	4H	5.55	6.09	6.04	6.58	7.05	11.63	12.17	12.12	12.66	13.13
	6H	7.30	7.75	7.82	8.27	8.76	12.01	12.46	12.53	12.97	13.47
	8H	8.32	8.72	8.83	9.21	9.78	12.32	12.72	12.83	13.21	13.79