

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: P1059704

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059704
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-H560D930-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: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

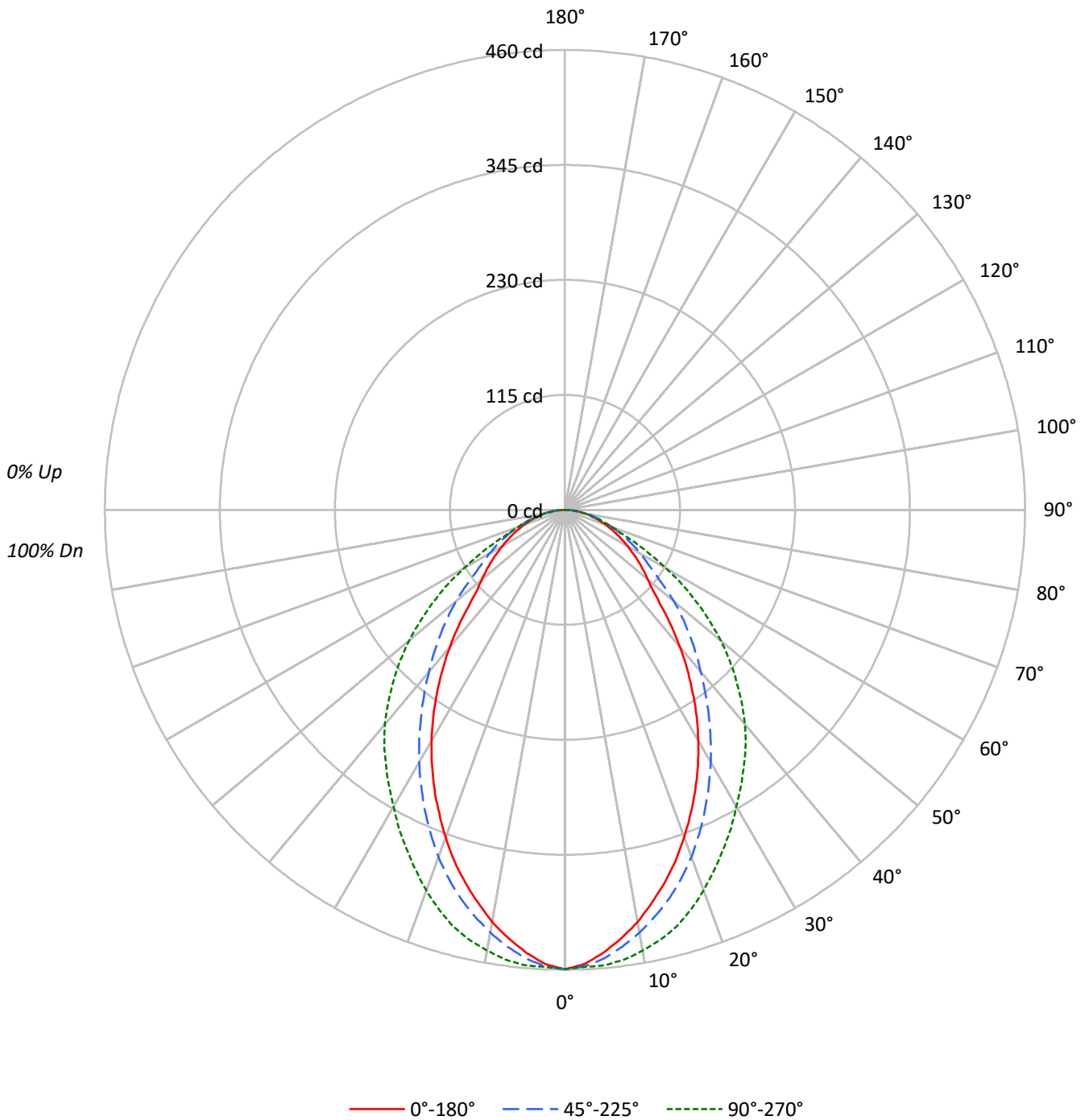
Lumens per Lamp: N/A
Luminaire Lumens: 830.1 lumens
Efficiency: N/A
Efficacy: 47.7 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059704

CATALOG NUMBER: S123RDR-H560D930-X4F0-XX-UDD-WVL-S

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	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	66	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°	5396	5396	5396
5°	5239	5309	5392
10°	4991	5120	5338
15°	4689	4892	5246
20°	4356	4619	5062
25°	4000	4292	4851
30°	3616	3952	4645
35°	3190	3591	4471
40°	2742	3237	4294
45°	2255	2916	4025
50°	1978	2598	3710
55°	1830	2217	3286
60°	1684	2036	2720
65°	1573	1870	2139
70°	1480	1703	1703
75°	1393	1565	1465
80°	1312	1420	1237
85°	1240	1374	943

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4025 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.5	5.1
10°-20°	113.9	13.7
20°-30°	154.4	18.6
30°-40°	161.5	19.5
40°-50°	140.1	16.9
50°-60°	104.2	12.6
60°-70°	66.9	8.1
70°-80°	35.9	4.3
80°-90°	10.8	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°	310.9	37.4
0°-40°	472.3	56.9
0°-60°	716.6	86.3
0°-90°	830.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	830.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	444	452	450	454	457	42
15°	386	395	402	419	432	108
25°	309	318	331	353	374	142
35°	222	233	250	282	312	139
45°	136	146	176	213	242	107
55°	89	92	108	139	160	80
65°	57	61	67	72	77	56
75°	31	36	34	33	32	33
85°	9	11	10	9	7	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	459.5	459.5	459.5	459.5	459.5
2.5°	454.7	461.2	456.8	456.8	457.4
5°	444.5	452.0	450.4	453.6	457.4
7.5°	432.1	440.1	440.7	448.2	453.6
10°	418.6	426.7	429.4	440.1	447.7
12.5°	402.4	411.6	416.4	429.9	440.7
15°	385.7	394.9	402.4	418.6	431.5
17.5°	368.0	377.1	386.8	405.1	419.1
20°	348.6	358.3	369.6	387.9	405.1
22.5°	328.6	338.9	350.7	370.6	390.0
25°	308.7	318.4	331.3	353.4	374.4
27.5°	287.7	297.9	311.4	335.6	359.3
30°	266.7	276.9	291.5	317.3	342.6
32.5°	245.1	255.4	271.0	300.1	327.5
35°	222.5	233.3	250.5	282.3	311.9
37.5°	200.9	211.2	230.6	265.6	296.8
40°	178.9	189.6	211.2	248.9	280.1
42.5°	157.3	168.1	193.4	231.1	261.8
45°	135.8	146.0	175.6	213.3	242.4
47.5°	119.1	126.6	158.9	194.5	223.6
50°	108.3	111.0	142.2	176.2	203.1
52.5°	98.6	100.7	123.9	157.8	182.1
55°	89.4	91.6	108.3	139.0	160.5
57.5°	80.3	83.0	96.4	119.6	139.0
60°	71.7	74.9	86.7	102.4	115.8
62.5°	64.1	67.9	77.0	86.7	95.9
65°	56.6	61.4	67.3	71.7	77.0
67.5°	49.6	55.0	58.2	59.3	59.8
70°	43.1	48.5	49.6	49.6	49.6
72.5°	36.6	42.6	41.5	40.9	40.4
75°	30.7	35.6	34.5	32.9	32.3
77.5°	24.8	29.1	27.5	26.4	24.8
80°	19.4	22.6	21.0	19.9	18.3
82.5°	14.5	16.7	15.1	14.0	12.4
85°	9.2	11.3	10.2	8.6	7.0
87.5°	4.8	6.5	5.4	4.8	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	12.65	14.13	13.01	14.44	14.76	15.40	16.88	15.76	17.20	17.51
	3H	14.36	15.68	14.73	16.01	16.38	16.42	17.75	16.80	18.08	18.44
	4H	15.02	16.26	15.42	16.61	16.99	16.79	18.03	17.19	18.38	18.76
	6H	15.52	16.67	15.93	17.03	17.43	17.04	18.19	17.45	18.56	18.95
	8H	15.69	16.79	16.12	17.18	17.58	17.11	18.21	17.54	18.60	19.00
	12H	15.82	16.87	16.25	17.25	17.68	17.15	18.19	17.58	18.58	19.01
4H	2H	13.42	14.66	13.82	15.01	15.39	15.67	16.91	16.07	17.26	17.64
	3H	15.35	16.38	15.76	16.78	17.18	16.92	17.96	17.34	18.36	18.76
	4H	16.16	17.09	16.59	17.50	17.94	17.41	18.34	17.84	18.76	19.20
	6H	16.80	17.60	17.25	18.05	18.51	17.79	18.60	18.25	19.04	19.50
	8H	17.02	17.78	17.49	18.22	18.69	17.90	18.66	18.37	19.10	19.57
	12H	17.20	17.87	17.68	18.35	18.82	17.97	18.65	18.46	19.13	19.60
8H	4H	16.48	17.23	16.94	17.68	18.14	17.60	18.36	18.07	18.80	19.27
	6H	17.27	17.89	17.77	18.38	18.86	18.09	18.71	18.59	19.21	19.68
	8H	17.59	18.16	18.11	18.67	19.15	18.27	18.83	18.78	19.34	19.83
	12H	17.87	18.37	18.38	18.86	19.43	18.40	18.89	18.91	19.39	19.95
12H	4H	16.50	17.17	16.98	17.65	18.13	17.62	18.29	18.10	18.77	19.24
	6H	17.32	17.88	17.84	18.39	18.88	18.13	18.69	18.64	19.20	19.69
	8H	17.72	18.21	18.23	18.70	19.27	18.36	18.85	18.87	19.35	19.91