

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: P1059722

Luminaire Tested: S123RDR-H560D940-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059722
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-H560D940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

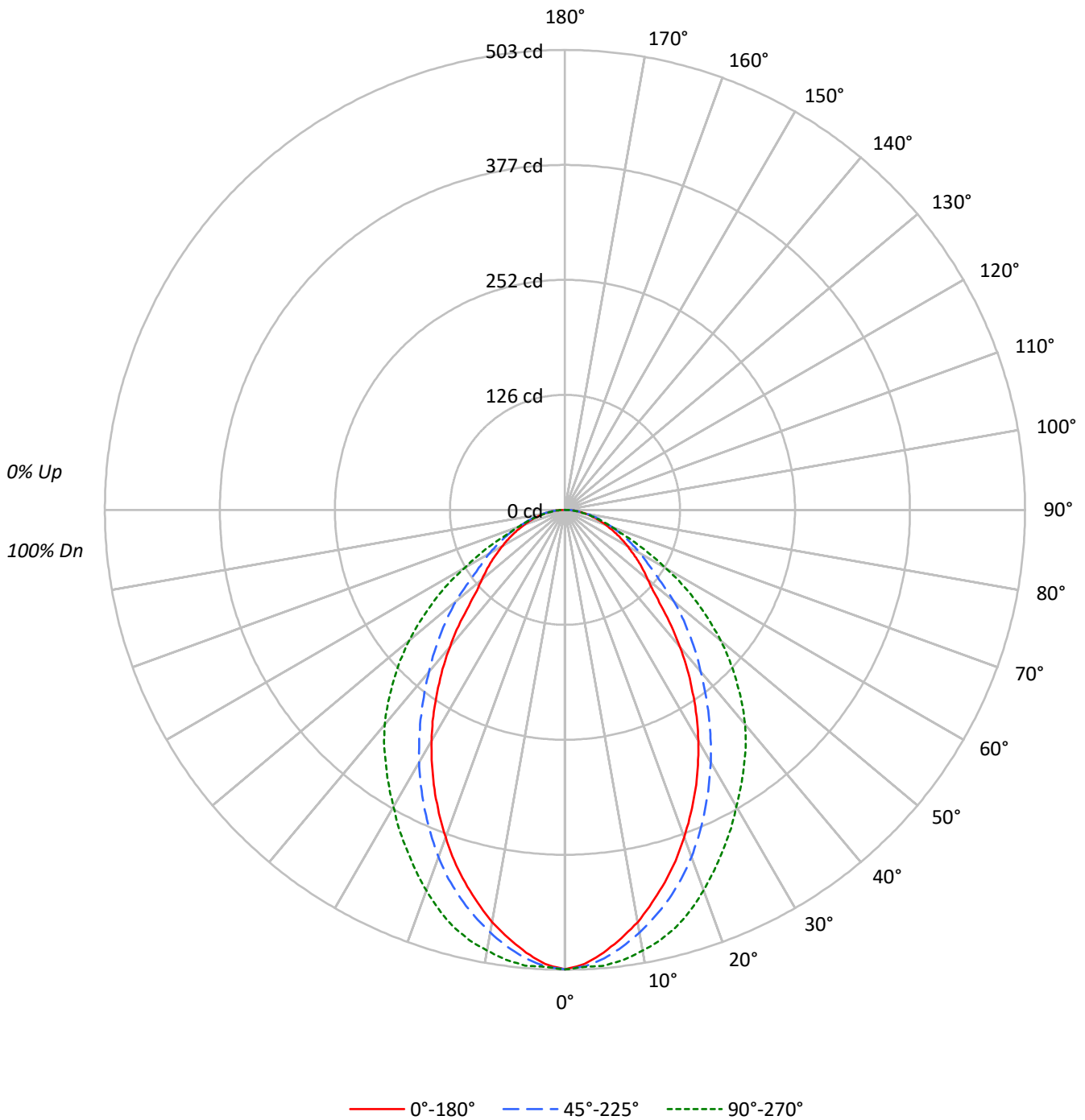
Lumens per Lamp: N/A
Luminaire Lumens: 907.9 lumens
Efficiency: N/A
Efficacy: 52.2 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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																		
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	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°	5902	5902	5902
5°	5730	5806	5897
10°	5459	5599	5838
15°	5129	5350	5738
20°	4763	5051	5537
25°	4374	4695	5306
30°	3955	4323	5081
35°	3488	3928	4891
40°	2998	3541	4697
45°	2466	3190	4404
50°	2163	2842	4057
55°	2002	2424	3595
60°	1841	2229	2976
65°	1720	2048	2342
70°	1617	1861	1861
75°	1524	1710	1606
80°	1434	1555	1352
85°	1347	1509	1037

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 4404 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	5.1
10°-20°	124.6	13.7
20°-30°	168.9	18.6
30°-40°	176.6	19.5
40°-50°	153.2	16.9
50°-60°	113.9	12.6
60°-70°	73.1	8.1
70°-80°	39.2	4.3
80°-90°	11.8	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°	340.0	37.4
0°-40°	516.6	56.9
0°-60°	783.7	86.3
0°-90°	907.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	907.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	486	494	493	496	500	46
15°	422	432	440	458	472	118
25°	338	348	362	386	410	155
35°	243	255	274	309	341	152
45°	148	160	192	233	265	117
55°	98	100	118	152	176	88
65°	62	67	74	78	84	62
75°	34	39	38	36	35	36
85°	10	12	11	9	8	11
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	502.6	502.6	502.6	502.6	502.6
2.5°	497.3	504.4	499.7	499.7	500.3
5°	486.1	494.4	492.6	496.1	500.3
7.5°	472.6	481.4	482.0	490.2	496.1
10°	457.8	466.7	469.6	481.4	489.6
12.5°	440.1	450.2	455.5	470.2	482.0
15°	421.9	431.9	440.1	457.8	472.0
17.5°	402.4	412.5	423.1	443.1	458.4
20°	381.2	391.8	404.2	424.2	443.1
22.5°	359.4	370.6	383.6	405.4	426.6
25°	337.6	348.2	362.4	386.5	409.5
27.5°	314.6	325.8	340.6	367.1	393.0
30°	291.7	302.9	318.8	347.1	374.7
32.5°	268.1	279.3	296.4	328.2	358.2
35°	243.3	255.1	274.0	308.8	341.2
37.5°	219.8	231.0	252.2	290.5	324.7
40°	195.6	207.4	231.0	272.2	306.4
42.5°	172.1	183.8	211.5	252.8	286.4
45°	148.5	159.7	192.1	233.3	265.2
47.5°	130.2	138.5	173.8	212.7	244.5
50°	118.4	121.4	155.6	192.7	222.1
52.5°	107.8	110.2	135.5	172.6	199.2
55°	97.8	100.2	118.4	152.0	175.6
57.5°	87.8	90.7	105.5	130.8	152.0
60°	78.4	81.9	94.9	112.0	126.7
62.5°	70.1	74.2	84.3	94.9	104.9
65°	61.9	67.2	73.7	78.4	84.3
67.5°	54.2	60.1	63.6	64.8	65.4
70°	47.1	53.0	54.2	54.2	54.2
72.5°	40.1	46.5	45.4	44.8	44.2
75°	33.6	38.9	37.7	35.9	35.4
77.5°	27.1	31.8	30.1	28.9	27.1
80°	21.2	24.7	23.0	21.8	20.0
82.5°	15.9	18.3	16.5	15.3	13.6
85°	10.0	12.4	11.2	9.4	7.7
87.5°	5.3	7.1	5.9	5.3	2.9
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	12.95	14.43	13.32	14.75	15.06	15.71	17.19	16.08	17.51	17.82
	3H	14.66	15.99	15.04	16.32	16.68	16.73	18.06	17.11	18.39	18.75
	4H	15.32	16.57	15.72	16.92	17.30	17.10	18.34	17.50	18.69	19.07
	6H	15.82	16.97	16.24	17.34	17.73	17.35	18.50	17.76	18.87	19.26
	8H	16.00	17.10	16.43	17.49	17.89	17.42	18.52	17.85	18.91	19.31
	12H	16.13	17.18	16.56	17.56	17.99	17.46	18.50	17.89	18.89	19.32
4H	2H	13.73	14.97	14.13	15.32	15.70	15.98	17.23	16.38	17.58	17.96
	3H	15.65	16.69	16.06	17.09	17.49	17.24	18.27	17.65	18.67	19.07
	4H	16.46	17.39	16.90	17.81	18.25	17.72	18.65	18.15	19.07	19.51
	6H	17.10	17.91	17.56	18.36	18.82	18.10	18.91	18.56	19.35	19.81
	8H	17.33	18.09	17.80	18.53	19.00	18.21	18.97	18.68	19.41	19.88
	12H	17.51	18.18	17.99	18.66	19.13	18.29	18.96	18.77	19.44	19.91
8H	4H	16.78	17.54	17.25	17.98	18.45	17.91	18.67	18.38	19.11	19.58
	6H	17.58	18.20	18.07	18.69	19.17	18.40	19.03	18.90	19.52	20.00
	8H	17.90	18.46	18.42	18.97	19.46	18.58	19.14	19.09	19.65	20.14
	12H	18.18	18.68	18.69	19.17	19.74	18.71	19.21	19.22	19.70	20.26
12H	4H	16.81	17.48	17.29	17.96	18.43	17.93	18.60	18.41	19.08	19.55
	6H	17.63	18.19	18.15	18.70	19.19	18.44	19.00	18.95	19.51	20.00
	8H	18.02	18.52	18.53	19.01	19.58	18.67	19.16	19.18	19.66	20.22