

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055654

Luminaire Tested: S123R3DR-S560D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055654
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S560D950-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

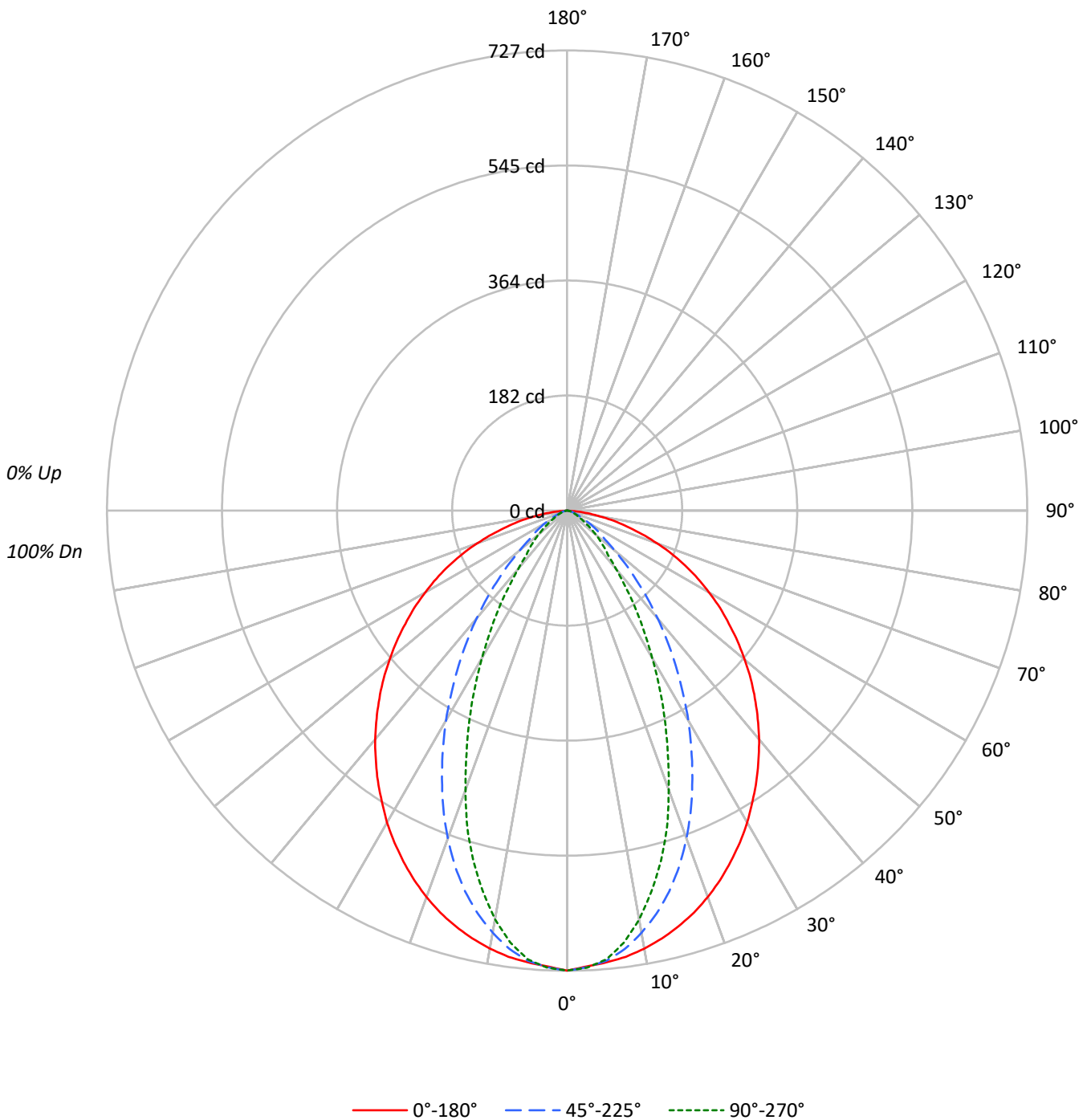
Lumens per Lamp: N/A
Luminaire Lumens: 1010.8 lumens
Efficiency: N/A
Efficacy: 52.9 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (A_{in}): 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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8763	8763	8763
5°	8671	8638	8613
10°	8603	8291	8030
15°	8488	7774	7146
20°	8336	7071	6020
25°	8139	6223	4857
30°	7923	5332	3741
35°	7676	4401	2768
40°	7427	3502	1887
45°	7154	2619	1422
50°	6861	1821	1110
55°	6560	1333	811
60°	6245	996	581
65°	5877	668	451
70°	5319	486	363
75°	4588	354	289
80°	3680	285	236
85°	1909	290	194

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7154 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.2	6.6
10°-20°	174.9	17.3
20°-30°	219.7	21.7
30°-40°	204.7	20.2
40°-50°	156.7	15.5
50°-60°	104.1	10.3
60°-70°	56.1	5.6
70°-80°	23.0	2.3
80°-90°	4.4	0.4
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°	461.8	45.7
0°-40°	666.5	65.9
0°-60°	927.2	91.7
0°-90°	1010.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1010.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	727	727	727	727	727	
5°	716	724	714	711	712	68
15°	680	669	623	586	572	192
25°	612	570	468	390	365	282
35°	522	444	299	212	188	326
45°	420	310	154	90	83	324
55°	312	180	63	44	39	280
65°	206	70	23	17	16	204
75°	98	16	8	7	6	105
85°	14	2	2	2	1	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	726.8	726.8	726.8	726.8	726.8
2.5°	720.6	729.6	722.0	722.7	722.7
5°	716.5	724.1	713.7	711.0	711.7
7.5°	711.0	715.8	698.6	689.6	688.2
10°	702.7	704.1	677.2	661.4	655.9
12.5°	692.4	687.5	652.4	626.2	615.9
15°	680.0	668.9	622.8	586.3	572.5
17.5°	666.2	647.6	589.0	541.5	525.0
20°	649.7	623.5	551.1	491.9	469.2
22.5°	631.7	598.0	511.2	440.9	415.4
25°	611.8	570.4	467.8	389.9	365.1
27.5°	591.1	540.8	425.1	341.7	316.2
30°	569.1	510.5	383.0	294.9	268.7
32.5°	544.9	477.4	339.6	251.5	225.3
35°	521.5	444.4	299.0	211.5	188.1
37.5°	496.7	411.3	259.7	176.4	150.2
40°	471.9	377.5	222.5	141.9	119.9
42.5°	445.7	343.8	187.4	113.0	95.8
45°	419.6	310.0	153.6	90.2	83.4
47.5°	393.4	276.3	124.0	77.8	71.0
50°	365.8	243.9	97.1	66.1	59.2
52.5°	339.6	211.5	75.8	54.4	48.2
55°	312.1	180.5	63.4	44.1	38.6
57.5°	286.6	148.8	52.4	34.4	30.3
60°	259.0	120.6	41.3	26.9	24.1
62.5°	232.9	94.4	31.7	21.4	19.3
65°	206.0	69.6	23.4	17.2	15.8
67.5°	179.1	50.3	17.9	13.8	13.1
70°	150.9	37.9	13.8	11.0	10.3
72.5°	124.0	26.9	10.3	9.0	8.3
75°	98.5	16.5	7.6	6.9	6.2
77.5°	75.8	9.6	5.5	5.5	4.8
80°	53.0	5.5	4.1	4.1	3.4
82.5°	32.4	3.4	2.8	2.8	2.8
85°	13.8	2.1	2.1	2.1	1.4
87.5°	2.1	0.7	0.7	0.7	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	17.35	18.71	17.72	19.02	19.34	5.92	7.28	6.28	7.59	7.90
	3H	19.11	20.31	19.49	20.64	21.01	6.58	7.79	6.96	8.12	8.48
	4H	19.81	20.93	20.21	21.28	21.66	6.78	7.91	7.18	8.26	8.64
	6H	20.32	21.35	20.73	21.72	22.12	6.90	7.93	7.32	8.30	8.70
	8H	20.46	21.44	20.89	21.83	22.23	6.94	7.92	7.37	8.31	8.71
	12H	20.51	21.45	20.94	21.83	22.26	6.95	7.89	7.38	8.27	8.70
4H	2H	17.16	18.29	17.56	18.64	19.02	6.48	7.60	6.88	7.95	8.33
	3H	18.95	19.88	19.37	20.28	20.68	7.28	8.20	7.69	8.60	9.00
	4H	19.65	20.47	20.08	20.89	21.33	7.54	8.36	7.97	8.78	9.22
	6H	20.22	20.93	20.68	21.38	21.84	7.73	8.44	8.19	8.89	9.35
	8H	20.39	21.06	20.86	21.50	21.97	7.79	8.45	8.25	8.90	9.37
	12H	20.48	21.07	20.97	21.55	22.02	7.82	8.41	8.31	8.89	9.36
8H	4H	19.53	20.19	19.99	20.64	21.11	7.85	8.51	8.32	8.96	9.43
	6H	20.08	20.62	20.58	21.12	21.60	8.10	8.64	8.60	9.13	9.61
	8H	20.26	20.74	20.78	21.26	21.75	8.19	8.67	8.71	9.19	9.68
	12H	20.36	20.79	20.87	21.28	21.85	8.27	8.70	8.78	9.19	9.76
12H	4H	19.48	20.07	19.97	20.55	21.03	7.90	8.48	8.38	8.96	9.44
	6H	20.02	20.51	20.54	21.02	21.51	8.14	8.63	8.66	9.14	9.63
	8H	20.22	20.64	20.73	21.14	21.71	8.27	8.70	8.79	9.19	9.76