

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: P1055195

Luminaire Tested: S122R3DR-S290D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055195
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S290D950-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

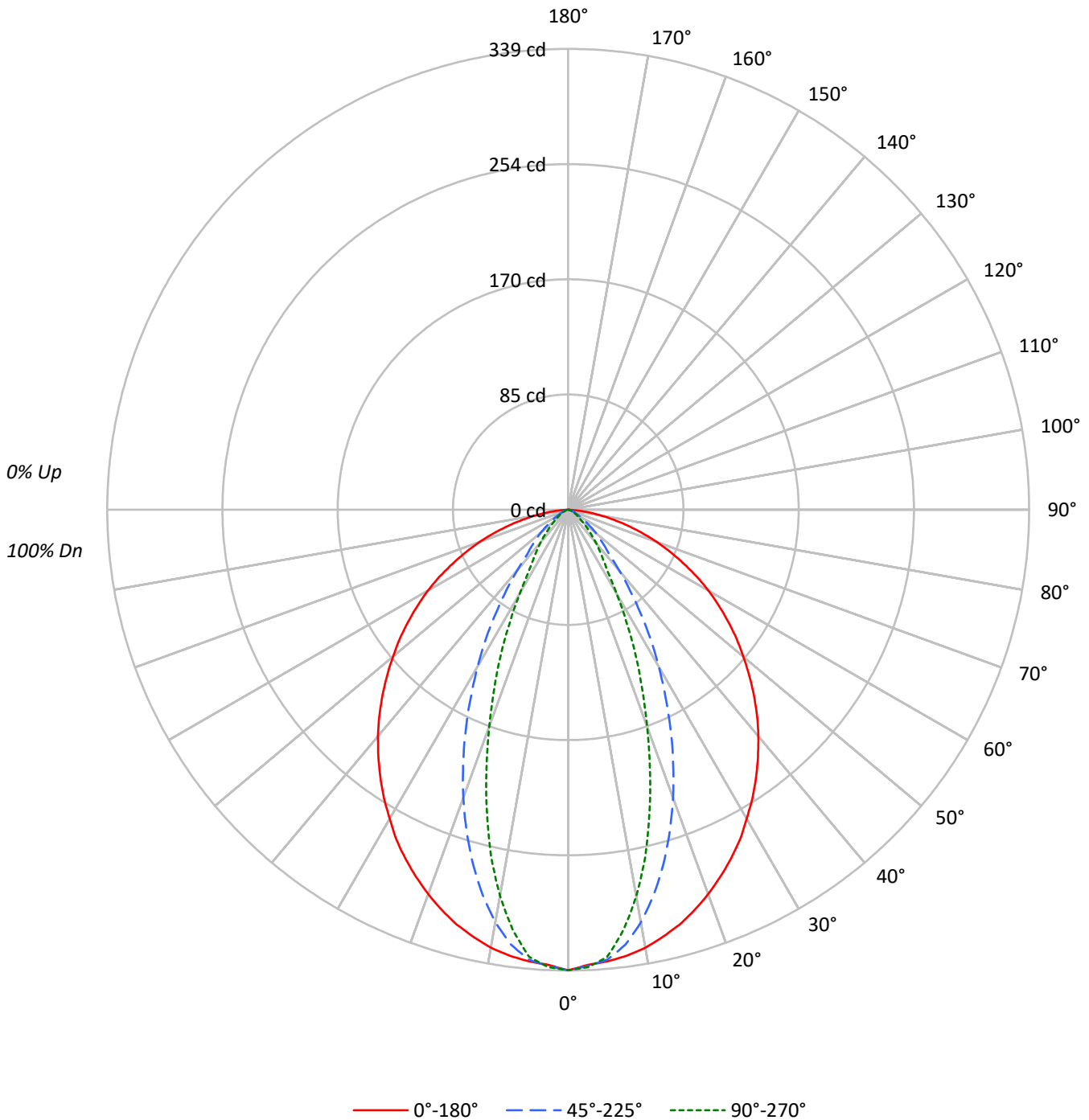
Lumens per Lamp: N/A
Luminaire Lumens: 388.3 lumens
Efficiency: N/A
Efficacy: 30.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6419	6419	6419
5°	6341	6318	6278
10°	6295	5927	5552
15°	6198	5302	4529
20°	6069	4546	3415
25°	5920	3723	2440
30°	5740	2907	1553
35°	5569	2132	1036
40°	5382	1437	782
45°	5174	1013	557
50°	4958	772	392
55°	4747	535	287
60°	4517	364	235
65°	4187	260	188
70°	3817	205	161
75°	3316	183	124
80°	2629	131	131
85°	1435	174	87

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5174 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.0	8.0
10°-20°	76.0	19.6
20°-30°	86.9	22.4
30°-40°	73.7	19.0
40°-50°	55.0	14.2
50°-60°	35.5	9.2
60°-70°	19.8	5.1
70°-80°	8.7	2.2
80°-90°	1.8	0.5
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°	193.9	49.9
0°-40°	267.5	68.9
0°-60°	358.0	92.2
0°-90°	388.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	388.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	339	339	339	339	339	
5°	333	338	332	329	330	32
15°	316	308	270	242	231	89
25°	283	250	178	130	117	130
35°	241	182	92	50	45	151
45°	193	115	38	24	21	149
55°	144	54	16	10	9	128
65°	93	20	6	5	4	93
75°	45	4	2	2	2	48
85°	7	0	1	0	0	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	338.8	338.8	338.8	338.8	338.8
2.5°	335.1	340.1	335.9	335.9	336.8
5°	333.4	337.6	332.2	328.9	330.1
7.5°	330.9	333.9	322.6	312.7	311.8
10°	327.2	328.5	308.1	292.7	288.6
12.5°	321.8	318.9	290.3	268.7	261.6
15°	316.0	308.1	270.3	241.7	230.9
17.5°	308.9	294.8	248.3	213.4	200.1
20°	301.0	281.1	225.5	183.9	169.4
22.5°	292.3	265.8	201.8	156.1	141.6
25°	283.2	250.0	178.1	130.4	116.7
27.5°	273.6	233.4	154.9	107.1	92.2
30°	262.4	216.3	132.9	84.7	71.0
32.5°	252.0	198.5	112.5	65.6	54.0
35°	240.8	181.5	92.2	50.2	44.8
37.5°	229.2	164.4	74.3	42.4	37.8
40°	217.6	147.4	58.1	35.7	31.6
42.5°	205.5	130.8	44.8	29.9	25.7
45°	193.1	114.6	37.8	24.5	20.8
47.5°	180.6	98.4	31.6	19.5	16.6
50°	168.2	83.0	26.2	15.4	13.3
52.5°	156.1	68.5	20.8	12.5	10.8
55°	143.7	54.4	16.2	10.0	8.7
57.5°	131.2	42.4	12.5	8.3	7.5
60°	119.2	32.0	9.6	6.6	6.2
62.5°	106.7	25.7	7.5	5.4	5.0
65°	93.4	19.9	5.8	4.6	4.2
67.5°	81.4	14.5	4.6	3.7	3.3
70°	68.9	10.0	3.7	3.3	2.9
72.5°	56.9	6.2	2.9	2.5	2.5
75°	45.3	4.2	2.5	2.1	1.7
77.5°	34.5	2.5	1.7	1.7	1.2
80°	24.1	1.7	1.2	1.2	1.2
82.5°	14.9	1.2	0.8	0.8	0.8
85°	6.6	0.4	0.8	0.4	0.4
87.5°	1.2	0.4	0.4	0.4	0.4
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	14.72	16.04	15.08	16.35	16.66	1.02	2.34	1.39	2.65	2.97
	3H	17.18	18.35	17.56	18.68	19.05	1.86	3.03	2.24	3.36	3.72
	4H	18.14	19.23	18.54	19.58	19.97	2.14	3.23	2.55	3.59	3.97
	6H	18.83	19.83	19.24	20.20	20.60	2.32	3.33	2.74	3.70	4.09
	8H	19.02	19.97	19.45	20.36	20.77	2.39	3.34	2.82	3.73	4.13
	12H	19.10	20.01	19.54	20.39	20.82	2.41	3.32	2.84	3.70	4.13
4H	2H	14.50	15.59	14.90	15.94	16.33	1.59	2.68	1.99	3.03	3.42
	3H	16.98	17.88	17.39	18.28	18.68	2.61	3.51	3.02	3.91	4.31
	4H	17.93	18.73	18.36	19.15	19.59	2.99	3.79	3.43	4.21	4.65
	6H	18.68	19.37	19.15	19.82	20.29	3.27	3.96	3.73	4.41	4.87
	8H	18.92	19.57	19.39	20.02	20.49	3.36	4.00	3.83	4.45	4.92
	12H	19.05	19.62	19.54	20.10	20.58	3.40	3.97	3.88	4.45	4.92
8H	4H	17.79	18.44	18.26	18.89	19.36	3.37	4.01	3.84	4.46	4.93
	6H	18.53	19.06	19.04	19.56	20.04	3.71	4.23	4.21	4.73	5.21
	8H	18.78	19.25	19.30	19.76	20.26	3.84	4.31	4.36	4.82	5.31
	12H	18.93	19.34	19.44	19.83	20.41	3.91	4.32	4.43	4.82	5.39
12H	4H	17.75	18.32	18.24	18.80	19.28	3.49	4.06	3.98	4.54	5.01
	6H	18.47	18.94	19.00	19.46	19.95	3.83	4.30	4.35	4.81	5.31
	8H	18.74	19.15	19.25	19.65	20.22	3.99	4.41	4.51	4.90	5.47