

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: P1055189

Luminaire Tested: S122R3DR-S290D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055189
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-S290D935-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

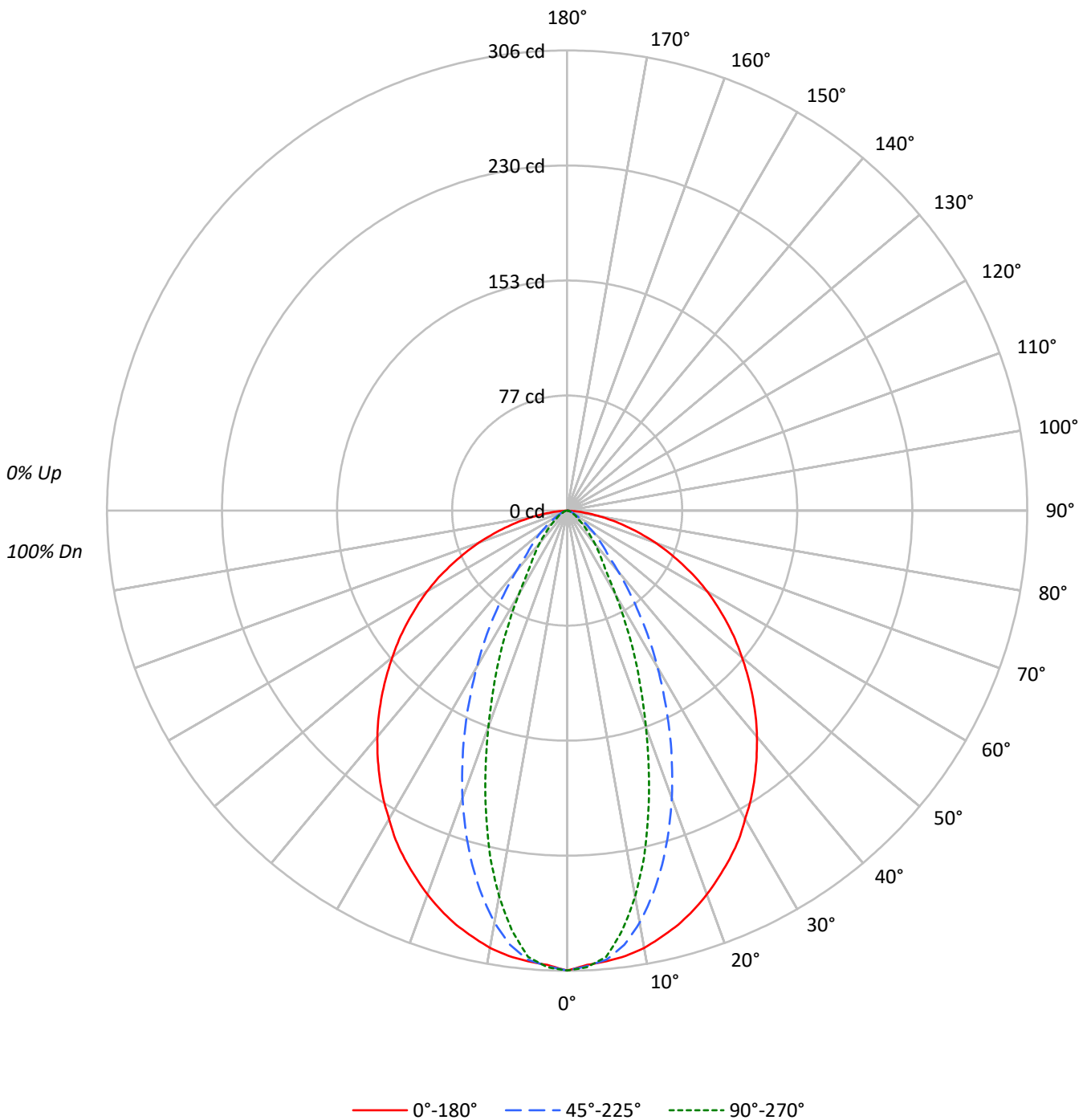
Lumens per Lamp: N/A
Luminaire Lumens: 350.4 lumens
Efficiency: N/A
Efficacy: 27.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90				90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80				80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71				71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64				64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58				58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53				53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49				49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45				45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42				42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39				39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5794	5794	5794
5°	5723	5702	5666
10°	5681	5350	5012
15°	5594	4786	4088
20°	5478	4103	3083
25°	5343	3361	2201
30°	5180	2623	1402
35°	5028	1924	937
40°	4857	1298	705
45°	4670	914	501
50°	4474	696	354
55°	4284	482	261
60°	4077	326	212
65°	3779	233	166
70°	3446	188	144
75°	2987	161	110
80°	2368	120	120
85°	1304	152	87

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4670 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.0	8.0
10°-20°	68.6	19.6
20°-30°	78.4	22.4
30°-40°	66.5	19.0
40°-50°	49.6	14.2
50°-60°	32.0	9.1
60°-70°	17.9	5.1
70°-80°	7.8	2.2
80°-90°	1.6	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°	175.0	49.9
0°-40°	241.5	68.9
0°-60°	323.1	92.2
0°-90°	350.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	350.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	306	306	306	306	306	
5°	301	305	300	297	298	29
15°	285	278	244	218	208	80
25°	256	226	161	118	105	118
35°	217	164	83	45	40	136
45°	174	103	34	22	19	134
55°	130	49	15	9	8	116
65°	84	18	5	4	4	84
75°	41	4	2	2	2	44
85°	6	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°	305.8	305.8	305.8	305.8	305.8
2.5°	302.4	306.9	303.2	303.2	303.9
5°	300.9	304.7	299.8	296.8	297.9
7.5°	298.7	301.3	291.2	282.2	281.4
10°	295.3	296.4	278.1	264.2	260.5
12.5°	290.4	287.8	262.0	242.5	236.1
15°	285.2	278.1	244.0	218.1	208.4
17.5°	278.8	266.1	224.1	192.6	180.6
20°	271.7	253.7	203.5	166.0	152.9
22.5°	263.8	239.8	182.1	140.9	127.8
25°	255.6	225.6	160.8	117.7	105.3
27.5°	247.0	210.6	139.8	96.7	83.2
30°	236.8	195.2	119.9	76.5	64.1
32.5°	227.5	179.1	101.6	59.2	48.7
35°	217.4	163.8	83.2	45.3	40.5
37.5°	206.9	148.4	67.1	38.2	34.1
40°	196.4	133.0	52.5	32.2	28.5
42.5°	185.5	118.0	40.5	27.0	23.2
45°	174.3	103.4	34.1	22.1	18.7
47.5°	163.0	88.8	28.5	17.6	15.0
50°	151.8	75.0	23.6	13.9	12.0
52.5°	140.9	61.8	18.7	11.2	9.7
55°	129.7	49.1	14.6	9.0	7.9
57.5°	118.4	38.2	11.2	7.5	6.7
60°	107.6	28.9	8.6	6.0	5.6
62.5°	96.3	23.2	6.7	4.9	4.5
65°	84.3	18.0	5.2	4.1	3.7
67.5°	73.5	13.1	4.1	3.4	3.0
70°	62.2	9.0	3.4	3.0	2.6
72.5°	51.3	5.6	2.6	2.2	2.2
75°	40.8	3.7	2.2	1.9	1.5
77.5°	31.1	2.2	1.5	1.5	1.1
80°	21.7	1.5	1.1	1.1	1.1
82.5°	13.5	1.1	0.7	0.7	0.7
85°	6.0	0.4	0.7	0.4	0.4
87.5°	1.1	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	14.35	15.67	14.72	15.99	16.30	0.66	1.98	1.03	2.29	2.61
	3H	16.82	18.00	17.20	18.33	18.69	1.51	2.69	1.89	3.02	3.38
	4H	17.78	18.87	18.18	19.22	19.60	1.79	2.88	2.19	3.23	3.61
	6H	18.47	19.47	18.88	19.84	20.23	1.97	2.97	2.38	3.34	3.74
	8H	18.66	19.61	19.09	20.00	20.41	2.03	2.98	2.46	3.37	3.78
	12H	18.74	19.65	19.18	20.03	20.46	2.06	2.97	2.49	3.35	3.78
4H	2H	14.14	15.23	14.54	15.58	15.96	1.22	2.31	1.63	2.67	3.05
	3H	16.62	17.52	17.04	17.92	18.33	2.26	3.15	2.67	3.56	3.96
	4H	17.56	18.37	18.00	18.78	19.23	2.63	3.43	3.06	3.85	4.29
	6H	18.32	19.01	18.78	19.46	19.92	2.91	3.60	3.37	4.05	4.51
	8H	18.56	19.21	19.03	19.65	20.12	3.00	3.64	3.47	4.09	4.56
	12H	18.69	19.26	19.18	19.74	20.22	3.04	3.61	3.53	4.09	4.57
8H	4H	17.43	18.08	17.90	18.52	18.99	3.00	3.64	3.47	4.09	4.56
	6H	18.17	18.69	18.67	19.19	19.67	3.34	3.87	3.84	4.36	4.85
	8H	18.41	18.88	18.94	19.40	19.89	3.46	3.93	3.99	4.45	4.94
	12H	18.57	18.98	19.08	19.47	20.05	3.55	3.96	4.06	4.46	5.03
12H	4H	17.39	17.96	17.87	18.44	18.91	3.12	3.68	3.60	4.17	4.64
	6H	18.11	18.58	18.63	19.10	19.59	3.46	3.93	3.98	4.44	4.94
	8H	18.37	18.79	18.89	19.28	19.85	3.62	4.03	4.13	4.53	5.10