

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: P1055183

Luminaire Tested: S122R3DR-S290D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055183
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-S290D927-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

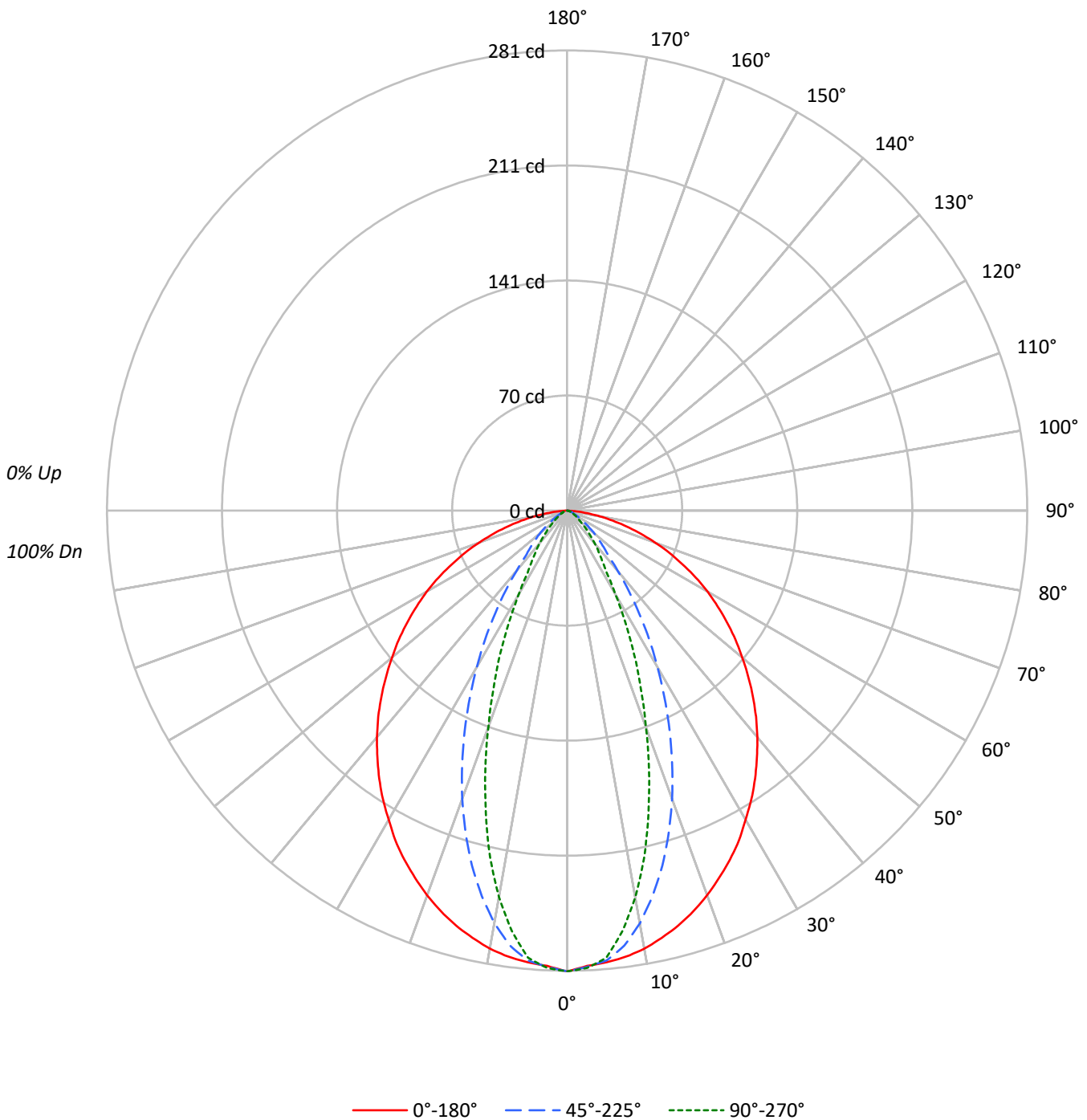
Lumens per Lamp: N/A
Luminaire Lumens: 322.4 lumens
Efficiency: N/A
Efficacy: 25.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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					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°	5331	5331	5331
5°	5266	5245	5213
10°	5227	4921	4609
15°	5147	4403	3760
20°	5040	3774	2837
25°	4917	3092	2026
30°	4767	2413	1291
35°	4626	1769	860
40°	4469	1195	648
45°	4295	841	461
50°	4115	640	324
55°	3941	443	238
60°	3751	299	197
65°	3479	215	152
70°	3169	172	133
75°	2752	154	102
80°	2182	109	109
85°	1196	152	65

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4295 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.7	8.0
10°-20°	63.1	19.6
20°-30°	72.1	22.4
30°-40°	61.2	19.0
40°-50°	45.6	14.2
50°-60°	29.5	9.1
60°-70°	16.4	5.1
70°-80°	7.2	2.2
80°-90°	1.5	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°	161.0	49.9
0°-40°	222.1	68.9
0°-60°	297.3	92.2
0°-90°	322.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	322.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	281	281	281	281	281	
5°	277	280	276	273	274	26
15°	262	256	224	201	192	74
25°	235	208	148	108	97	108
35°	200	151	76	42	37	125
45°	160	95	31	20	17	124
55°	119	45	13	8	7	107
65°	78	17	5	4	3	77
75°	38	3	2	2	1	40
85°	6	0	1	0	0	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	281.4	281.4	281.4	281.4	281.4
2.5°	278.3	282.4	278.9	278.9	279.6
5°	276.9	280.3	275.8	273.1	274.1
7.5°	274.8	277.2	267.9	259.6	258.9
10°	271.7	272.7	255.8	243.1	239.6
12.5°	267.2	264.8	241.0	223.1	217.2
15°	262.4	255.8	224.5	200.7	191.7
17.5°	256.5	244.8	206.2	177.2	166.2
20°	250.0	233.4	187.2	152.7	140.7
22.5°	242.7	220.7	167.6	129.6	117.6
25°	235.2	207.6	147.9	108.3	96.9
27.5°	227.2	193.8	128.6	89.0	76.5
30°	217.9	179.6	110.3	70.3	59.0
32.5°	209.3	164.8	93.4	54.5	44.8
35°	200.0	150.7	76.5	41.7	37.2
37.5°	190.3	136.5	61.7	35.2	31.4
40°	180.7	122.4	48.3	29.7	26.2
42.5°	170.7	108.6	37.2	24.8	21.4
45°	160.3	95.2	31.4	20.3	17.2
47.5°	150.0	81.7	26.2	16.2	13.8
50°	139.6	69.0	21.7	12.8	11.0
52.5°	129.6	56.9	17.2	10.3	9.0
55°	119.3	45.2	13.4	8.3	7.2
57.5°	109.0	35.2	10.3	6.9	6.2
60°	99.0	26.5	7.9	5.5	5.2
62.5°	88.6	21.4	6.2	4.5	4.1
65°	77.6	16.6	4.8	3.8	3.4
67.5°	67.6	12.1	3.8	3.1	2.8
70°	57.2	8.3	3.1	2.8	2.4
72.5°	47.2	5.2	2.4	2.1	2.1
75°	37.6	3.4	2.1	1.7	1.4
77.5°	28.6	2.1	1.4	1.4	1.0
80°	20.0	1.4	1.0	1.0	1.0
82.5°	12.4	1.0	0.7	0.7	0.7
85°	5.5	0.3	0.7	0.3	0.3
87.5°	1.0	0.3	0.3	0.3	0.3
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	14.07	15.39	14.44	15.70	16.02	0.38	1.70	0.74	2.01	2.32
	3H	16.54	17.71	16.92	18.04	18.40	1.24	2.41	1.62	2.74	3.10
	4H	17.49	18.59	17.90	18.94	19.32	1.52	2.61	1.92	2.96	3.34
	6H	18.18	19.18	18.60	19.55	19.95	1.69	2.70	2.11	3.07	3.46
	8H	18.38	19.33	18.81	19.72	20.12	1.77	2.72	2.20	3.11	3.51
	12H	18.46	19.37	18.89	19.75	20.18	1.79	2.69	2.22	3.08	3.51
4H	2H	13.85	14.95	14.26	15.30	15.68	0.94	2.03	1.34	2.38	2.77
	3H	16.34	17.23	16.75	17.64	18.04	1.99	2.88	2.40	3.29	3.69
	4H	17.28	18.08	17.71	18.50	18.94	2.36	3.16	2.79	3.57	4.02
	6H	18.04	18.73	18.50	19.17	19.64	2.63	3.32	3.10	3.77	4.24
	8H	18.28	18.92	18.75	19.37	19.84	2.73	3.38	3.20	3.82	4.29
	12H	18.41	18.97	18.89	19.46	19.93	2.77	3.34	3.26	3.82	4.29
8H	4H	17.15	17.79	17.62	18.24	18.71	2.73	3.37	3.20	3.82	4.29
	6H	17.89	18.41	18.39	18.91	19.39	3.07	3.60	3.58	4.09	4.58
	8H	18.13	18.60	18.65	19.12	19.61	3.21	3.68	3.73	4.20	4.69
	12H	18.28	18.69	18.79	19.19	19.76	3.28	3.70	3.80	4.19	4.76
12H	4H	17.10	17.67	17.59	18.15	18.63	2.85	3.42	3.34	3.90	4.38
	6H	17.83	18.30	18.35	18.81	19.30	3.19	3.66	3.71	4.18	4.67
	8H	18.09	18.50	18.60	19.00	19.57	3.37	3.79	3.89	4.28	4.85