

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: P1055323

Luminaire Tested: S122R3DR-H290D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055323
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H290D935-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

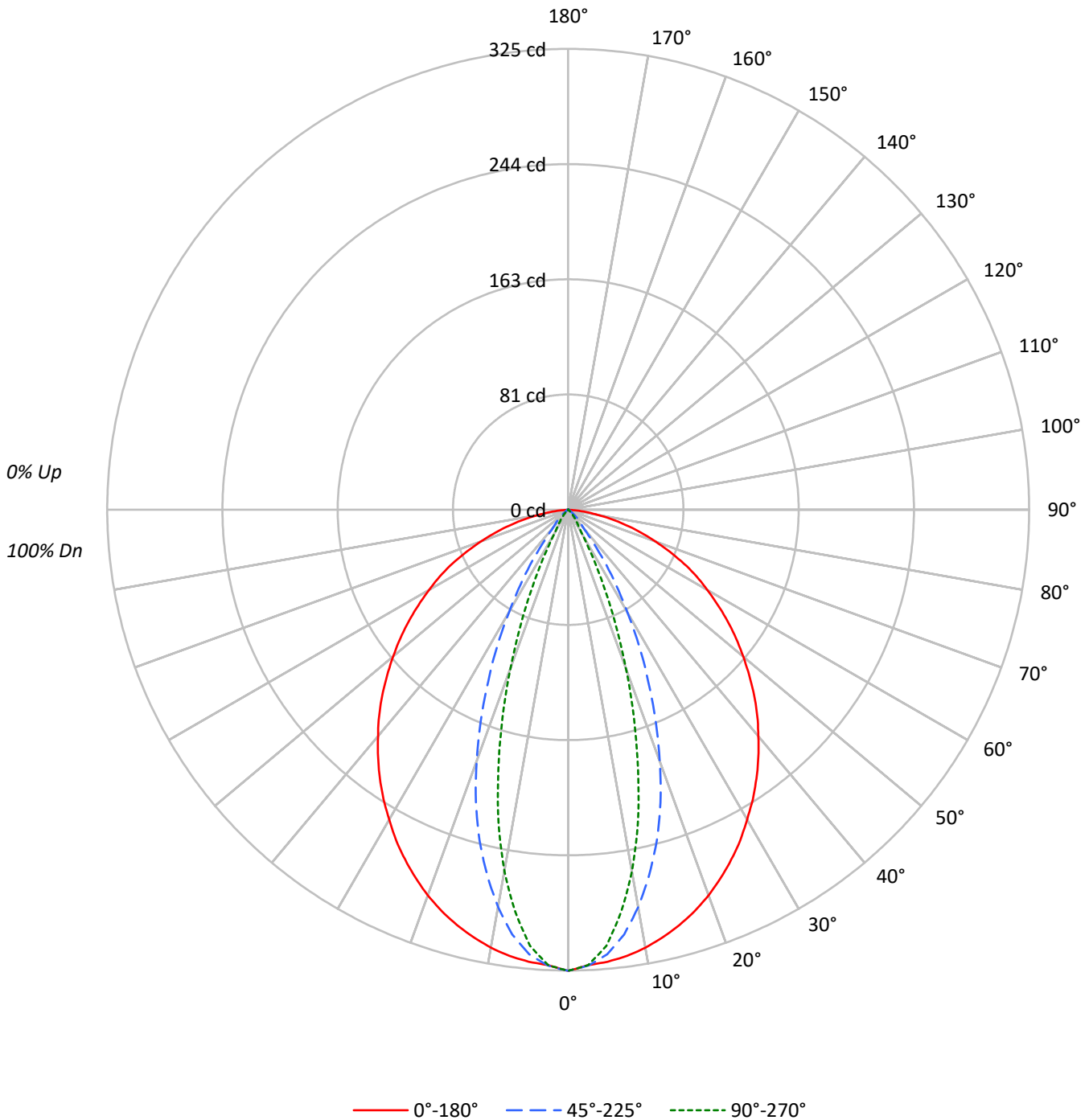
Lumens per Lamp: N/A
Luminaire Lumens: 295.9 lumens
Efficiency: N/A
Efficacy: 25.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6161	6161	6161
5°	6086	5987	5873
10°	6035	5473	4985
15°	5947	4737	3733
20°	5835	3807	2389
25°	5690	2791	1227
30°	5520	1825	400
35°	5352	1011	234
40°	5159	406	129
45°	4968	271	51
50°	4748	153	21
55°	4532	73	13
60°	4293	27	0
65°	4039	18	0
70°	3623	22	0
75°	3118	29	0
80°	2368	0	0
85°	978	87	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4968 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.2	9.9
10°-20°	67.7	22.9
20°-30°	68.8	23.2
30°-40°	51.6	17.4
40°-50°	36.1	12.2
50°-60°	22.1	7.5
60°-70°	13.2	4.5
70°-80°	6.1	2.1
80°-90°	1.1	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°	165.7	56.0
0°-40°	217.3	73.4
0°-60°	275.6	93.1
0°-90°	295.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	295.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	325	325	325	325	325	
5°	320	323	315	309	309	30
15°	303	287	242	204	190	85
25°	272	224	134	76	59	125
35°	231	151	44	13	10	145
45°	185	80	10	3	2	143
55°	137	24	2	1	0	123
65°	90	7	0	0	0	89
75°	43	1	0	0	0	45
85°	4	0	0	0	0	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	325.2	325.2	325.2	325.2	325.2
2.5°	321.5	326.4	321.9	321.1	321.5
5°	320.0	323.0	314.8	308.8	308.8
7.5°	317.4	317.4	302.1	289.7	286.0
10°	313.7	309.5	284.5	264.7	259.1
12.5°	308.8	299.1	263.9	235.9	226.9
15°	303.2	286.7	241.5	204.5	190.3
17.5°	296.8	272.9	216.5	170.5	154.0
20°	289.4	258.0	188.8	135.7	118.5
22.5°	281.1	241.5	160.8	104.7	86.4
25°	272.2	224.3	133.5	76.3	58.7
27.5°	262.8	206.4	108.4	52.3	35.9
30°	252.3	187.7	83.4	31.0	18.3
32.5°	242.2	169.7	62.4	16.8	13.5
35°	231.4	150.7	43.7	13.1	10.1
37.5°	220.2	132.7	26.9	9.7	7.5
40°	208.6	114.4	16.4	7.1	5.2
42.5°	197.4	97.2	13.1	4.9	3.4
45°	185.4	79.6	10.1	3.0	1.9
47.5°	173.1	63.6	7.5	1.9	1.1
50°	161.1	49.3	5.2	1.1	0.7
52.5°	149.2	36.3	3.4	0.7	0.4
55°	137.2	24.3	2.2	0.7	0.4
57.5°	125.2	17.2	1.5	0.4	0.4
60°	113.3	13.5	0.7	0.4	0.0
62.5°	102.1	10.5	0.7	0.4	0.4
65°	90.1	7.1	0.4	0.4	0.0
67.5°	77.4	4.5	0.4	0.4	0.0
70°	65.4	2.6	0.4	0.4	0.0
72.5°	53.8	1.5	0.4	0.4	0.0
75°	42.6	0.7	0.4	0.4	0.0
77.5°	31.8	0.4	0.0	0.4	0.0
80°	21.7	0.0	0.0	0.4	0.0
82.5°	12.7	0.0	0.0	0.4	0.0
85°	4.5	0.0	0.4	0.4	0.0
87.5°	0.0	0.0	0.4	0.4	0.0
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	12.53	13.79	12.89	14.10	14.42	0.00	0.00	0.00	0.00	0.00
	3H	16.27	17.39	16.65	17.72	18.08	0.00	0.00	0.00	0.00	0.00
	4H	17.58	18.62	17.98	18.97	19.36	0.00	0.00	0.00	0.00	0.00
	6H	18.44	19.39	18.85	19.76	20.16	0.00	0.00	0.00	0.00	0.00
	8H	18.65	19.55	19.08	19.94	20.35	0.00	0.00	0.00	0.00	0.00
	12H	18.71	19.58	19.15	19.96	20.39	0.00	0.00	0.00	0.00	0.00
4H	2H	12.28	13.32	12.69	13.67	14.06	0.00	0.00	0.00	0.00	0.00
	3H	16.02	16.88	16.44	17.28	17.69	0.00	0.00	0.00	0.00	0.00
	4H	17.32	18.08	17.75	18.50	18.94	0.00	0.00	0.00	0.00	0.00
	6H	18.24	18.89	18.70	19.34	19.81	0.00	0.00	0.00	0.00	0.00
	8H	18.50	19.11	18.97	19.56	20.03	0.00	0.00	0.00	0.00	0.00
	12H	18.60	19.14	19.09	19.62	20.10	0.00	0.00	0.00	0.00	0.00
8H	4H	17.17	17.78	17.64	18.23	18.70	0.00	0.00	0.00	0.00	0.00
	6H	18.08	18.57	18.58	19.07	19.55	0.00	0.00	0.00	0.00	0.00
	8H	18.33	18.78	18.86	19.29	19.79	0.00	0.00	0.00	0.00	0.00
	12H	18.45	18.84	18.97	19.34	19.91	0.00	0.00	0.00	0.00	0.00
12H	4H	17.12	17.66	17.61	18.15	18.62	0.00	0.00	0.00	0.00	0.00
	6H	18.01	18.46	18.54	18.97	19.47	0.00	0.00	0.00	0.00	0.00
	8H	18.29	18.68	18.81	19.17	19.75	0.00	0.00	0.00	0.00	0.00