

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055318

Luminaire Tested: S122R3DR-H290D927-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055318
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-H290D927-X4F0-XX-UDD-FLL-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

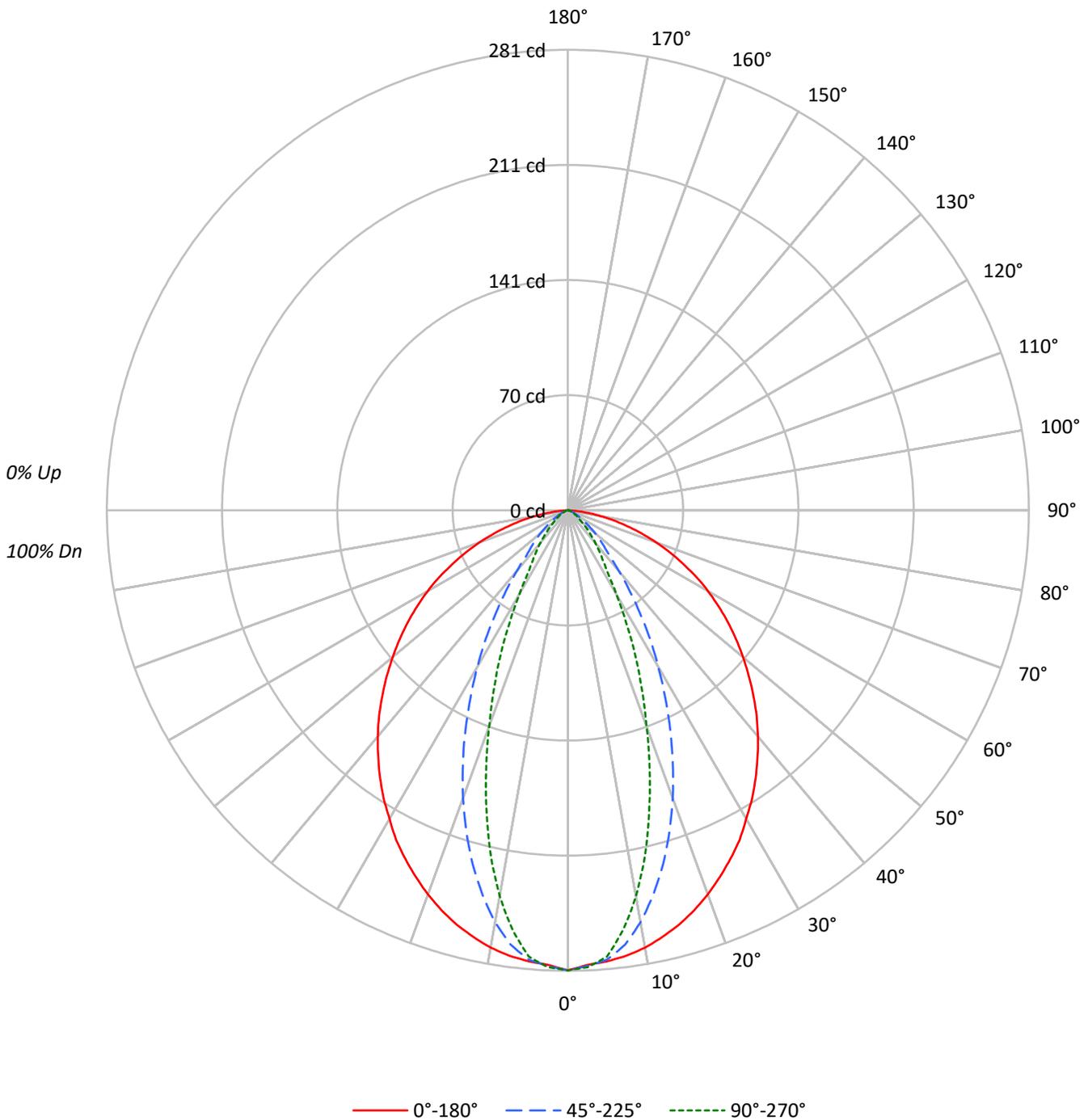
Lumens per Lamp: N/A
Luminaire Lumens: 321.7 lumens
Efficiency: N/A
Efficacy: 27.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	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°	5318	5318	5318
5°	5253	5234	5200
10°	5214	4910	4600
15°	5135	4392	3750
20°	5028	3766	2829
25°	4904	3085	2021
30°	4756	2409	1286
35°	4614	1767	858
40°	4457	1192	646
45°	4284	839	461
50°	4106	640	324
55°	3931	443	238
60°	3740	299	197
65°	3470	215	152
70°	3163	172	133
75°	2745	154	102
80°	2171	109	109
85°	1196	152	65

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4284 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.7	8.0
10°-20°	63.0	19.6
20°-30°	72.0	22.4
30°-40°	61.0	19.0
40°-50°	45.5	14.2
50°-60°	29.4	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°	160.6	49.9
0°-40°	221.6	68.9
0°-60°	296.6	92.2
0°-90°	321.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	321.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	281	281	281	281	281	
5°	276	280	275	272	273	26
15°	262	255	224	200	191	74
25°	235	207	148	108	97	108
35°	200	150	76	42	37	125
45°	160	95	31	20	17	123
55°	119	45	13	8	7	106
65°	77	16	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°	280.7	280.7	280.7	280.7	280.7
2.5°	277.6	281.7	278.3	278.3	279.0
5°	276.2	279.6	275.2	272.4	273.4
7.5°	274.1	276.5	267.3	259.0	258.3
10°	271.0	272.1	255.2	242.5	239.1
12.5°	266.6	264.2	240.4	222.5	216.7
15°	261.8	255.2	223.9	200.2	191.2
17.5°	255.9	244.2	205.7	176.8	165.8
20°	249.4	232.9	186.8	152.4	140.3
22.5°	242.1	220.1	167.2	129.3	117.3
25°	234.6	207.1	147.6	108.0	96.7
27.5°	226.7	193.3	128.3	88.7	76.4
30°	217.4	179.2	110.1	70.2	58.8
32.5°	208.8	164.4	93.2	54.3	44.7
35°	199.5	150.3	76.4	41.6	37.1
37.5°	189.9	136.2	61.6	35.1	31.3
40°	180.2	122.1	48.2	29.6	26.1
42.5°	170.3	108.3	37.1	24.8	21.3
45°	159.9	94.9	31.3	20.3	17.2
47.5°	149.6	81.5	26.1	16.2	13.8
50°	139.3	68.8	21.7	12.7	11.0
52.5°	129.3	56.8	17.2	10.3	8.9
55°	119.0	45.1	13.4	8.3	7.2
57.5°	108.7	35.1	10.3	6.9	6.2
60°	98.7	26.5	7.9	5.5	5.2
62.5°	88.4	21.3	6.2	4.5	4.1
65°	77.4	16.5	4.8	3.8	3.4
67.5°	67.4	12.0	3.8	3.1	2.8
70°	57.1	8.3	3.1	2.8	2.4
72.5°	47.1	5.2	2.4	2.1	2.1
75°	37.5	3.4	2.1	1.7	1.4
77.5°	28.5	2.1	1.4	1.4	1.0
80°	19.9	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	14.06	15.38	14.42	15.69	16.01	0.39	1.71	0.75	2.02	2.33
	3H	16.53	17.70	16.91	18.03	18.39	1.25	2.42	1.63	2.75	3.11
	4H	17.48	18.57	17.89	18.93	19.31	1.52	2.62	1.93	2.97	3.35
	6H	18.17	19.17	18.58	19.54	19.94	1.70	2.71	2.12	3.08	3.47
	8H	18.36	19.31	18.79	19.70	20.11	1.78	2.73	2.21	3.12	3.52
	12H	18.45	19.35	18.88	19.74	20.17	1.79	2.70	2.23	3.09	3.52
4H	2H	13.84	14.94	14.25	15.29	15.67	0.95	2.04	1.35	2.39	2.78
	3H	16.33	17.22	16.74	17.63	18.03	2.00	2.89	2.41	3.30	3.70
	4H	17.27	18.07	17.70	18.49	18.93	2.36	3.16	2.80	3.58	4.03
	6H	18.02	18.71	18.49	19.16	19.63	2.64	3.33	3.11	3.78	4.25
	8H	18.27	18.91	18.74	19.36	19.83	2.74	3.39	3.21	3.83	4.30
	12H	18.39	18.96	18.88	19.45	19.92	2.78	3.35	3.26	3.83	4.30
8H	4H	17.14	17.78	17.61	18.23	18.70	2.74	3.38	3.21	3.83	4.30
	6H	17.87	18.40	18.38	18.90	19.38	3.08	3.61	3.58	4.10	4.58
	8H	18.12	18.59	18.64	19.10	19.60	3.22	3.69	3.74	4.21	4.70
	12H	18.27	18.68	18.78	19.18	19.75	3.29	3.70	3.81	4.20	4.77
12H	4H	17.09	17.66	17.58	18.14	18.62	2.86	3.43	3.35	3.91	4.38
	6H	17.81	18.28	18.34	18.80	19.29	3.20	3.67	3.72	4.19	4.68
	8H	18.08	18.49	18.59	18.99	19.56	3.38	3.79	3.90	4.29	4.86