

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: P1055186

Luminaire Tested: S122R3DR-S290D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055186
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-S290D930-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

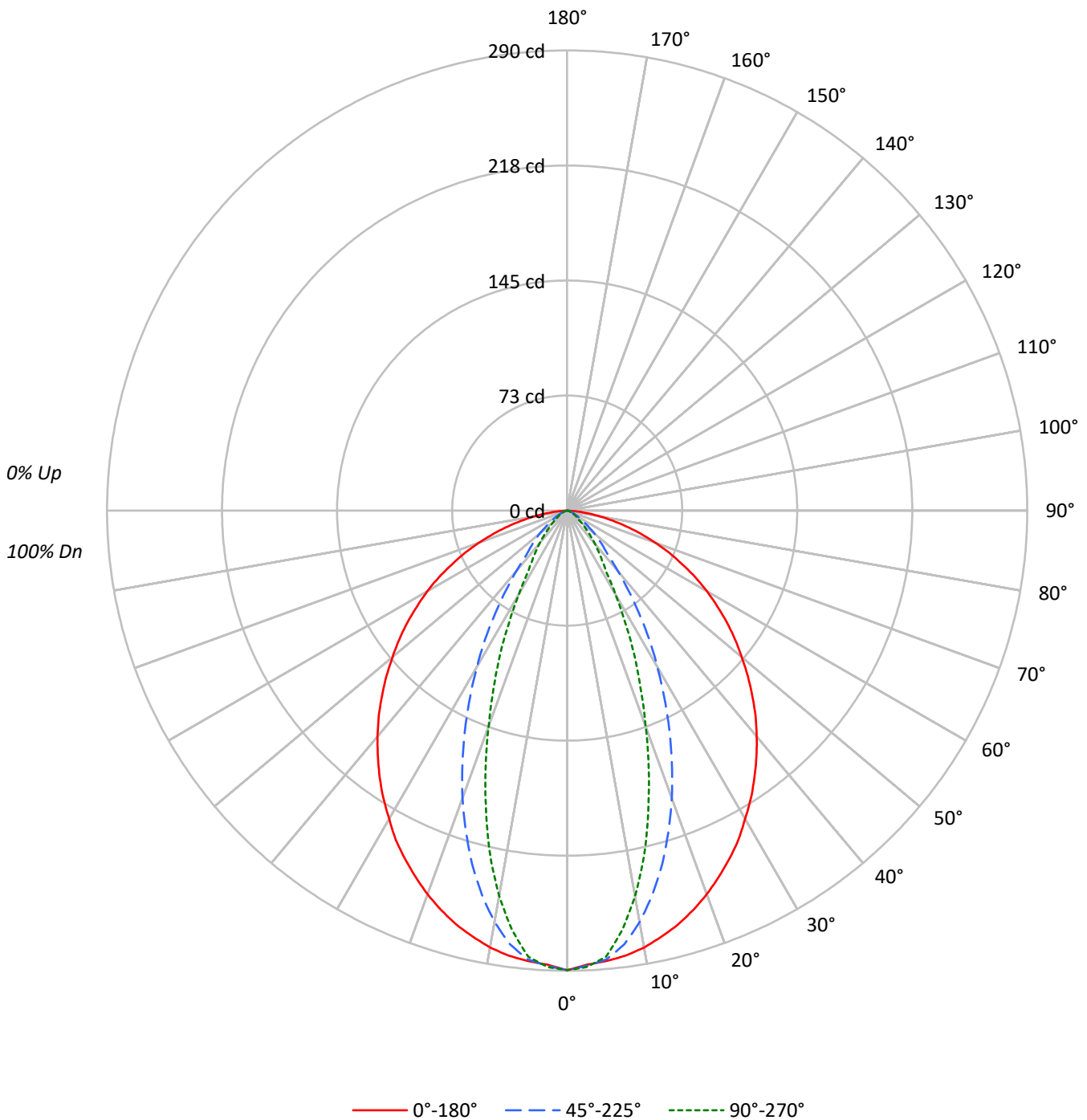
Lumens per Lamp: N/A
Luminaire Lumens: 331.9 lumens
Efficiency: N/A
Efficacy: 26.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	5487	5487	5487
5°	5420	5399	5365
10°	5379	5065	4744
15°	5298	4531	3870
20°	5188	3885	2919
25°	5059	3182	2084
30°	4907	2485	1328
35°	4760	1823	886
40°	4598	1229	668
45°	4421	865	474
50°	4235	660	336
55°	4056	456	248
60°	3857	311	201
65°	3577	224	157
70°	3263	177	138
75°	2833	154	102
80°	2248	120	120
85°	1239	152	87

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4421 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.5	8.0
10°-20°	65.0	19.6
20°-30°	74.2	22.4
30°-40°	62.9	19.0
40°-50°	47.0	14.2
50°-60°	30.4	9.1
60°-70°	16.9	5.1
70°-80°	7.4	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°	165.7	49.9
0°-40°	228.6	68.9
0°-60°	306.0	92.2
0°-90°	331.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	331.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	290	290	290	290	290	
5°	285	288	284	281	282	27
15°	270	263	231	206	197	76
25°	242	214	152	111	100	111
35°	206	155	79	43	38	129
45°	165	98	32	21	18	127
55°	123	46	14	8	8	110
65°	80	17	5	4	4	79
75°	39	4	2	2	1	41
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°	289.6	289.6	289.6	289.6	289.6
2.5°	286.4	290.6	287.1	287.1	287.8
5°	285.0	288.5	283.9	281.1	282.1
7.5°	282.8	285.3	275.7	267.2	266.5
10°	279.6	280.7	263.3	250.2	246.6
12.5°	275.0	272.5	248.1	229.6	223.6
15°	270.1	263.3	231.0	206.5	197.3
17.5°	264.0	252.0	212.2	182.4	171.0
20°	257.3	240.2	192.7	157.2	144.8
22.5°	249.8	227.1	172.5	133.4	121.0
25°	242.0	213.6	152.2	111.4	99.7
27.5°	233.9	199.4	132.4	91.6	78.8
30°	224.3	184.9	113.6	72.4	60.7
32.5°	215.4	169.6	96.2	56.1	46.1
35°	205.8	155.1	78.8	42.9	38.3
37.5°	195.9	140.5	63.5	36.2	32.3
40°	185.9	126.0	49.7	30.5	27.0
42.5°	175.7	111.8	38.3	25.6	22.0
45°	165.0	97.9	32.3	20.9	17.7
47.5°	154.4	84.1	27.0	16.7	14.2
50°	143.7	71.0	22.4	13.1	11.4
52.5°	133.4	58.6	17.7	10.6	9.2
55°	122.8	46.5	13.8	8.5	7.5
57.5°	112.1	36.2	10.6	7.1	6.4
60°	101.8	27.3	8.2	5.7	5.3
62.5°	91.2	22.0	6.4	4.6	4.3
65°	79.8	17.0	5.0	3.9	3.5
67.5°	69.6	12.4	3.9	3.2	2.8
70°	58.9	8.5	3.2	2.8	2.5
72.5°	48.6	5.3	2.5	2.1	2.1
75°	38.7	3.5	2.1	1.8	1.4
77.5°	29.5	2.1	1.4	1.4	1.1
80°	20.6	1.4	1.1	1.1	1.1
82.5°	12.8	1.1	0.7	0.7	0.7
85°	5.7	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	14.16	15.48	14.53	15.80	16.11	0.48	1.80	0.85	2.11	2.43
	3H	16.63	17.81	17.01	18.14	18.50	1.32	2.49	1.70	2.82	3.19
	4H	17.59	18.68	17.99	19.03	19.42	1.59	2.68	1.99	3.03	3.42
	6H	18.28	19.28	18.69	19.65	20.05	1.80	2.80	2.21	3.17	3.56
	8H	18.48	19.43	18.91	19.82	20.22	1.87	2.82	2.30	3.21	3.62
	12H	18.56	19.47	18.99	19.85	20.28	1.90	2.81	2.34	3.19	3.62
4H	2H	13.95	15.04	14.35	15.39	15.78	1.06	2.15	1.46	2.50	2.89
	3H	16.43	17.33	16.85	17.73	18.14	2.08	2.97	2.49	3.38	3.78
	4H	17.38	18.18	17.81	18.60	19.04	2.45	3.25	2.88	3.67	4.11
	6H	18.13	18.82	18.60	19.27	19.74	2.75	3.44	3.21	3.89	4.36
	8H	18.38	19.02	18.85	19.47	19.94	2.85	3.50	3.32	3.94	4.41
	12H	18.51	19.08	18.99	19.56	20.03	2.91	3.47	3.39	3.96	4.43
8H	4H	17.24	17.89	17.71	18.34	18.81	2.81	3.46	3.28	3.90	4.37
	6H	17.98	18.51	18.49	19.01	19.49	3.19	3.72	3.69	4.21	4.69
	8H	18.23	18.70	18.75	19.22	19.71	3.33	3.80	3.85	4.32	4.81
	12H	18.38	18.80	18.90	19.29	19.86	3.43	3.84	3.94	4.34	4.91
12H	4H	17.20	17.77	17.69	18.25	18.73	2.93	3.50	3.42	3.99	4.46
	6H	17.92	18.39	18.45	18.91	19.40	3.31	3.78	3.83	4.30	4.79
	8H	18.19	18.60	18.70	19.10	19.67	3.49	3.90	4.00	4.40	4.97