

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: P1055185

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055185
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-S290D930-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

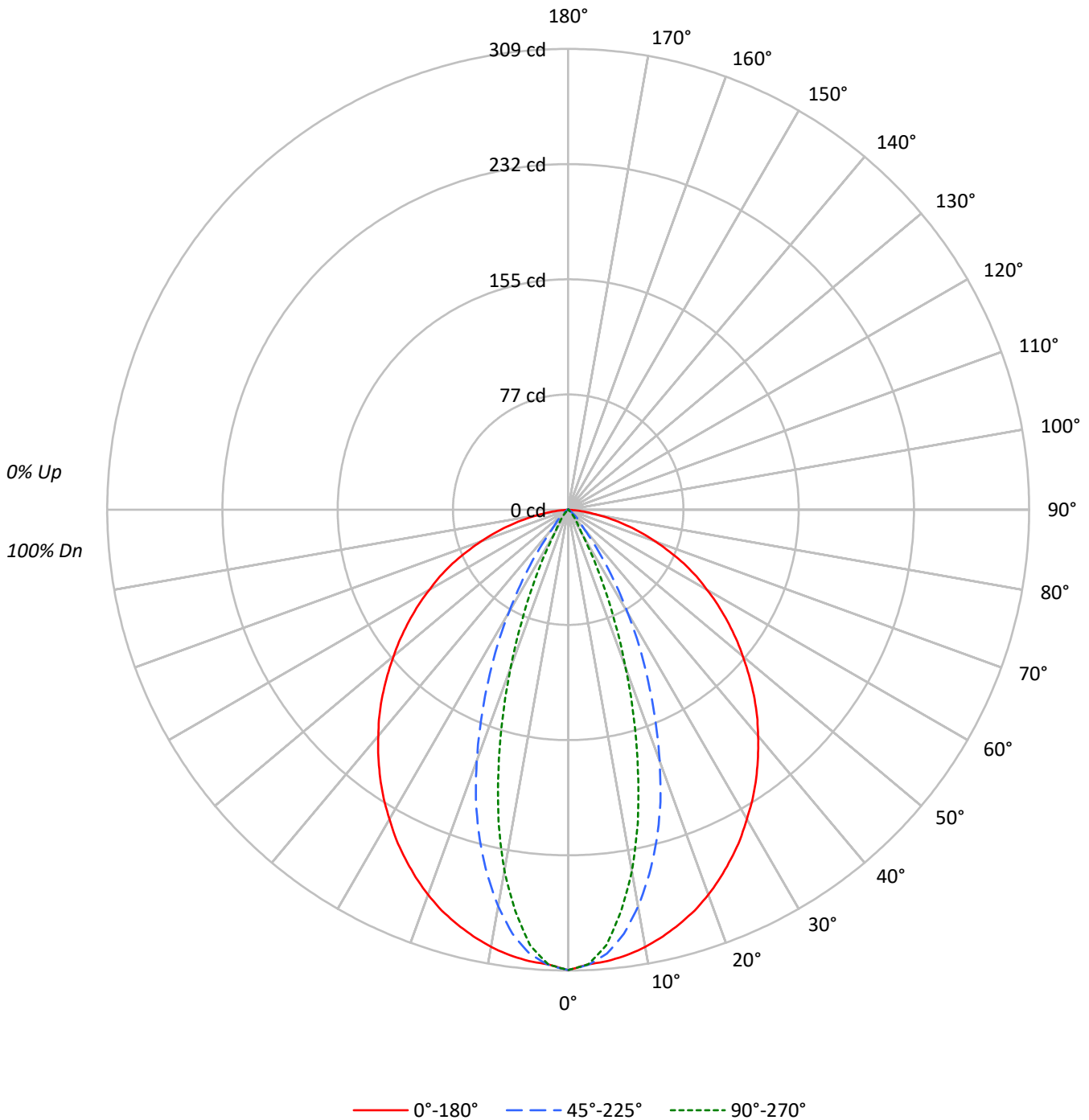
Lumens per Lamp: N/A
Luminaire Lumens: 281.0 lumens
Efficiency: N/A
Efficacy: 22.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5849	5849	5849
5°	5778	5683	5574
10°	5727	5196	4731
15°	5645	4496	3542
20°	5538	3613	2268
25°	5400	2649	1164
30°	5239	1730	381
35°	5081	960	222
40°	4897	386	124
45°	4716	257	48
50°	4507	147	21
55°	4301	69	13
60°	4073	27	0
65°	3833	18	0
70°	3440	22	0
75°	2965	29	0
80°	2248	0	0
85°	935	87	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4716 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.7	9.9
10°-20°	64.3	22.9
20°-30°	65.3	23.2
30°-40°	49.0	17.4
40°-50°	34.3	12.2
50°-60°	21.0	7.5
60°-70°	12.5	4.5
70°-80°	5.8	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°	157.3	56.0
0°-40°	206.3	73.4
0°-60°	261.6	93.1
0°-90°	281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	309	309	309	309	309	
5°	304	307	299	293	293	29
15°	288	272	229	194	181	81
25°	258	213	127	72	56	119
35°	220	143	42	12	10	137
45°	176	76	10	3	2	136
55°	130	23	2	1	0	116
65°	86	7	0	0	0	84
75°	40	1	0	0	0	43
85°	4	0	0	0	0	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	308.7	308.7	308.7	308.7	308.7
2.5°	305.2	309.8	305.5	304.8	305.2
5°	303.8	306.6	298.8	293.1	293.1
7.5°	301.3	301.3	286.7	275.0	271.5
10°	297.7	293.8	270.1	251.2	245.9
12.5°	293.1	283.9	250.5	223.9	215.4
15°	287.8	272.2	229.2	194.1	180.6
17.5°	281.8	259.1	205.5	161.8	146.2
20°	274.7	244.9	179.2	128.8	112.5
22.5°	266.9	229.2	152.6	99.4	82.0
25°	258.3	212.9	126.7	72.4	55.7
27.5°	249.5	195.9	102.9	49.7	34.1
30°	239.5	178.1	79.1	29.5	17.4
32.5°	230.0	161.1	59.3	16.0	12.8
35°	219.7	143.0	41.5	12.4	9.6
37.5°	209.0	126.0	25.6	9.2	7.1
40°	198.0	108.6	15.6	6.7	5.0
42.5°	187.4	92.3	12.4	4.6	3.2
45°	176.0	75.6	9.6	2.8	1.8
47.5°	164.3	60.3	7.1	1.8	1.1
50°	152.9	46.8	5.0	1.1	0.7
52.5°	141.6	34.4	3.2	0.7	0.4
55°	130.2	23.1	2.1	0.7	0.4
57.5°	118.9	16.3	1.4	0.4	0.4
60°	107.5	12.8	0.7	0.4	0.0
62.5°	96.9	9.9	0.7	0.4	0.4
65°	85.5	6.7	0.4	0.4	0.0
67.5°	73.5	4.3	0.4	0.4	0.0
70°	62.1	2.5	0.4	0.4	0.0
72.5°	51.1	1.4	0.4	0.4	0.0
75°	40.5	0.7	0.4	0.4	0.0
77.5°	30.2	0.4	0.0	0.4	0.0
80°	20.6	0.0	0.0	0.4	0.0
82.5°	12.1	0.0	0.0	0.4	0.0
85°	4.3	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	12.34	13.60	12.71	13.92	14.23	0.00	0.00	0.00	0.00	0.00
	3H	16.09	17.21	16.47	17.54	17.90	0.00	0.00	0.00	0.00	0.00
	4H	17.40	18.44	17.81	18.79	19.18	0.00	0.00	0.00	0.00	0.00
	6H	18.26	19.21	18.67	19.59	19.98	0.00	0.00	0.00	0.00	0.00
	8H	18.47	19.38	18.90	19.77	20.17	0.00	0.00	0.00	0.00	0.00
	12H	18.54	19.40	18.97	19.78	20.22	0.00	0.00	0.00	0.00	0.00
4H	2H	12.10	13.14	12.50	13.49	13.87	0.00	0.00	0.00	0.00	0.00
	3H	15.85	16.70	16.26	17.10	17.51	0.00	0.00	0.00	0.00	0.00
	4H	17.14	17.90	17.58	18.32	18.77	0.00	0.00	0.00	0.00	0.00
	6H	18.06	18.72	18.53	19.17	19.63	0.00	0.00	0.00	0.00	0.00
	8H	18.32	18.93	18.79	19.38	19.85	0.00	0.00	0.00	0.00	0.00
	12H	18.42	18.96	18.91	19.45	19.92	0.00	0.00	0.00	0.00	0.00
8H	4H	17.00	17.61	17.47	18.06	18.53	0.00	0.00	0.00	0.00	0.00
	6H	17.90	18.40	18.40	18.89	19.38	0.00	0.00	0.00	0.00	0.00
	8H	18.16	18.60	18.68	19.12	19.61	0.00	0.00	0.00	0.00	0.00
	12H	18.28	18.67	18.79	19.16	19.73	0.00	0.00	0.00	0.00	0.00
12H	4H	16.95	17.49	17.43	17.97	18.44	0.00	0.00	0.00	0.00	0.00
	6H	17.84	18.28	18.36	18.80	19.29	0.00	0.00	0.00	0.00	0.00
	8H	18.11	18.50	18.63	19.00	19.57	0.00	0.00	0.00	0.00	0.00