

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: P1055182

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055182
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-S290D927-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

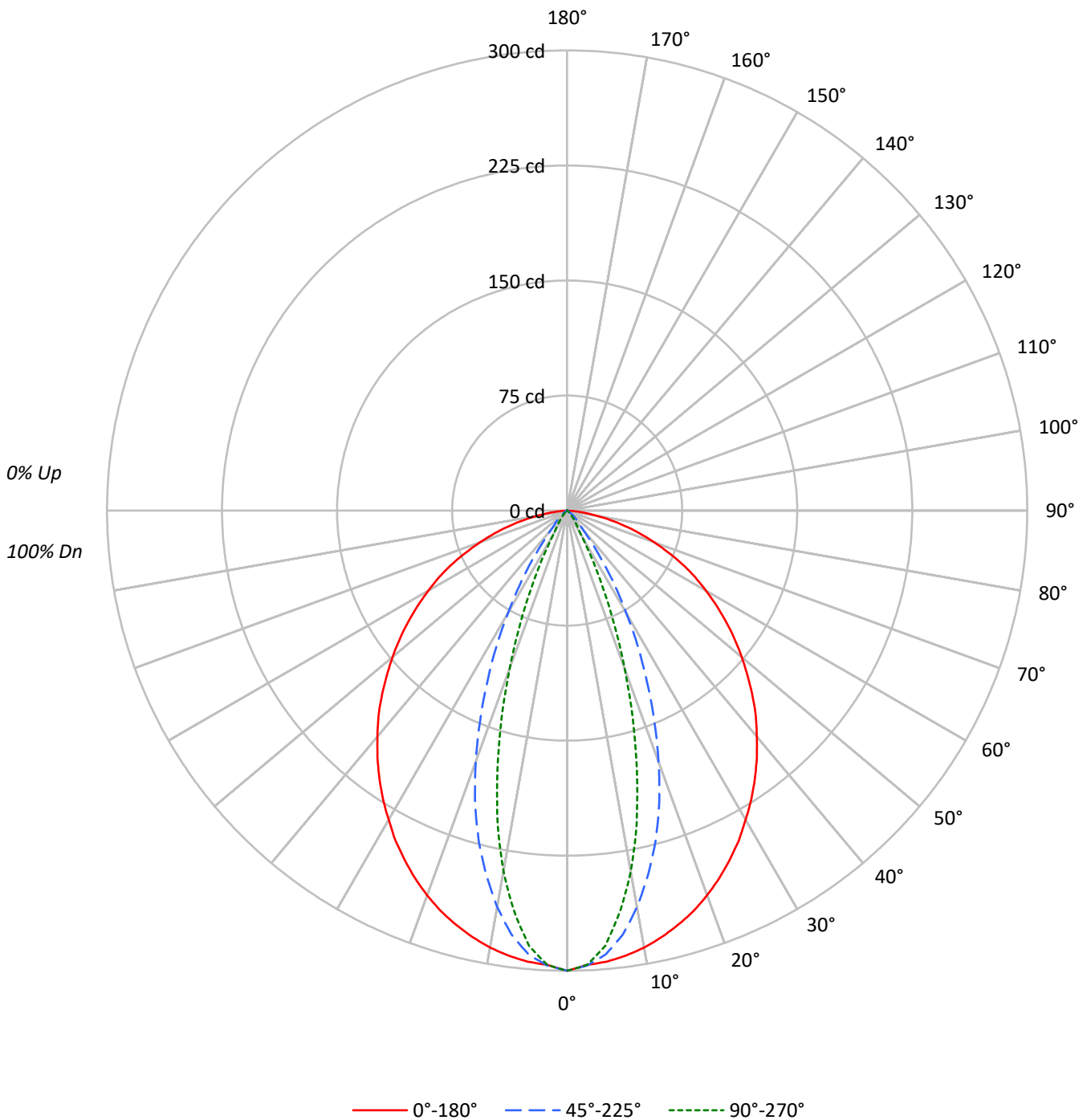
Lumens per Lamp: N/A
Luminaire Lumens: 272.8 lumens
Efficiency: N/A
Efficacy: 21.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	67	63	61
6	82	72	65	60	80	71	64	59	69	63	59		68	63	59		66	62	58	57
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	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5684	5684	5684
5°	5614	5521	5416
10°	5566	5048	4598
15°	5484	4368	3442
20°	5381	3510	2204
25°	5247	2573	1131
30°	5091	1682	370
35°	4936	932	215
40°	4758	376	119
45°	4582	249	46
50°	4380	141	21
55°	4178	69	10
60°	3960	27	0
65°	3725	13	0
70°	3340	17	0
75°	2877	22	0
80°	2182	0	0
85°	891	65	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4582 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.9	9.9
10°-20°	62.5	22.9
20°-30°	63.4	23.3
30°-40°	47.6	17.4
40°-50°	33.3	12.2
50°-60°	20.4	7.5
60°-70°	12.1	4.4
70°-80°	5.6	2.0
80°-90°	1.0	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°	152.8	56.0
0°-40°	200.4	73.5
0°-60°	254.1	93.1
0°-90°	272.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	272.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	300	300	300	300	300	
5°	295	298	290	285	285	28
15°	280	264	223	189	176	79
25°	251	207	123	70	54	116
35°	213	139	40	12	9	133
45°	171	73	9	3	2	132
55°	126	22	2	1	0	113
65°	83	7	0	0	0	82
75°	39	1	0	0	0	42
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°	300.0	300.0	300.0	300.0	300.0
2.5°	296.5	301.0	296.9	296.2	296.5
5°	295.2	297.9	290.3	284.8	284.8
7.5°	292.7	292.7	278.6	267.2	263.8
10°	289.3	285.5	262.4	244.1	239.0
12.5°	284.8	275.8	243.4	217.6	209.3
15°	279.6	264.5	222.7	188.6	175.5
17.5°	273.8	251.7	199.6	157.2	142.1
20°	266.9	237.9	174.1	125.2	109.3
22.5°	259.3	222.7	148.3	96.5	79.7
25°	251.0	206.9	123.1	70.3	54.1
27.5°	242.4	190.3	100.0	48.3	33.1
30°	232.7	173.1	76.9	28.6	16.9
32.5°	223.4	156.5	57.6	15.5	12.4
35°	213.4	139.0	40.3	12.1	9.3
37.5°	203.1	122.4	24.8	9.0	6.9
40°	192.4	105.5	15.2	6.6	4.8
42.5°	182.1	89.6	12.1	4.5	3.1
45°	171.0	73.4	9.3	2.8	1.7
47.5°	159.6	58.6	6.9	1.7	1.0
50°	148.6	45.5	4.8	1.0	0.7
52.5°	137.6	33.4	3.1	0.7	0.3
55°	126.5	22.4	2.1	0.7	0.3
57.5°	115.5	15.9	1.4	0.3	0.3
60°	104.5	12.4	0.7	0.3	0.0
62.5°	94.1	9.7	0.7	0.3	0.3
65°	83.1	6.6	0.3	0.3	0.0
67.5°	71.4	4.1	0.3	0.3	0.0
70°	60.3	2.4	0.3	0.3	0.0
72.5°	49.7	1.4	0.3	0.3	0.0
75°	39.3	0.7	0.3	0.3	0.0
77.5°	29.3	0.3	0.0	0.3	0.0
80°	20.0	0.0	0.0	0.3	0.0
82.5°	11.7	0.0	0.0	0.3	0.0
85°	4.1	0.0	0.3	0.3	0.0
87.5°	0.0	0.0	0.3	0.3	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	12.26	13.51	12.62	13.83	14.14	0.00	0.00	0.00	0.00	0.00
	3H	15.99	17.11	16.37	17.44	17.80	0.00	0.00	0.00	0.00	0.00
	4H	17.30	18.34	17.71	18.69	19.08	0.00	0.00	0.00	0.00	0.00
	6H	18.16	19.11	18.57	19.48	19.88	0.00	0.00	0.00	0.00	0.00
	8H	18.37	19.27	18.80	19.66	20.07	0.00	0.00	0.00	0.00	0.00
	12H	18.43	19.30	18.87	19.68	20.11	0.00	0.00	0.00	0.00	0.00
4H	2H	12.01	13.05	12.41	13.40	13.79	0.00	0.00	0.00	0.00	0.00
	3H	15.74	16.60	16.16	17.00	17.41	0.00	0.00	0.00	0.00	0.00
	4H	17.04	17.80	17.48	18.22	18.67	0.00	0.00	0.00	0.00	0.00
	6H	17.96	18.61	18.42	19.06	19.53	0.00	0.00	0.00	0.00	0.00
	8H	18.22	18.83	18.69	19.28	19.75	0.00	0.00	0.00	0.00	0.00
	12H	18.32	18.86	18.80	19.34	19.81	0.00	0.00	0.00	0.00	0.00
8H	4H	16.90	17.51	17.37	17.96	18.43	0.00	0.00	0.00	0.00	0.00
	6H	17.80	18.29	18.30	18.79	19.27	0.00	0.00	0.00	0.00	0.00
	8H	18.05	18.50	18.58	19.01	19.51	0.00	0.00	0.00	0.00	0.00
	12H	18.17	18.56	18.69	19.05	19.63	0.00	0.00	0.00	0.00	0.00
12H	4H	16.85	17.39	17.33	17.87	18.34	0.00	0.00	0.00	0.00	0.00
	6H	17.73	18.18	18.26	18.69	19.19	0.00	0.00	0.00	0.00	0.00
	8H	18.01	18.40	18.53	18.89	19.47	0.00	0.00	0.00	0.00	0.00