

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: P1055176

Luminaire Tested: S122R3DR-S290D840-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055176
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-S290D840-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

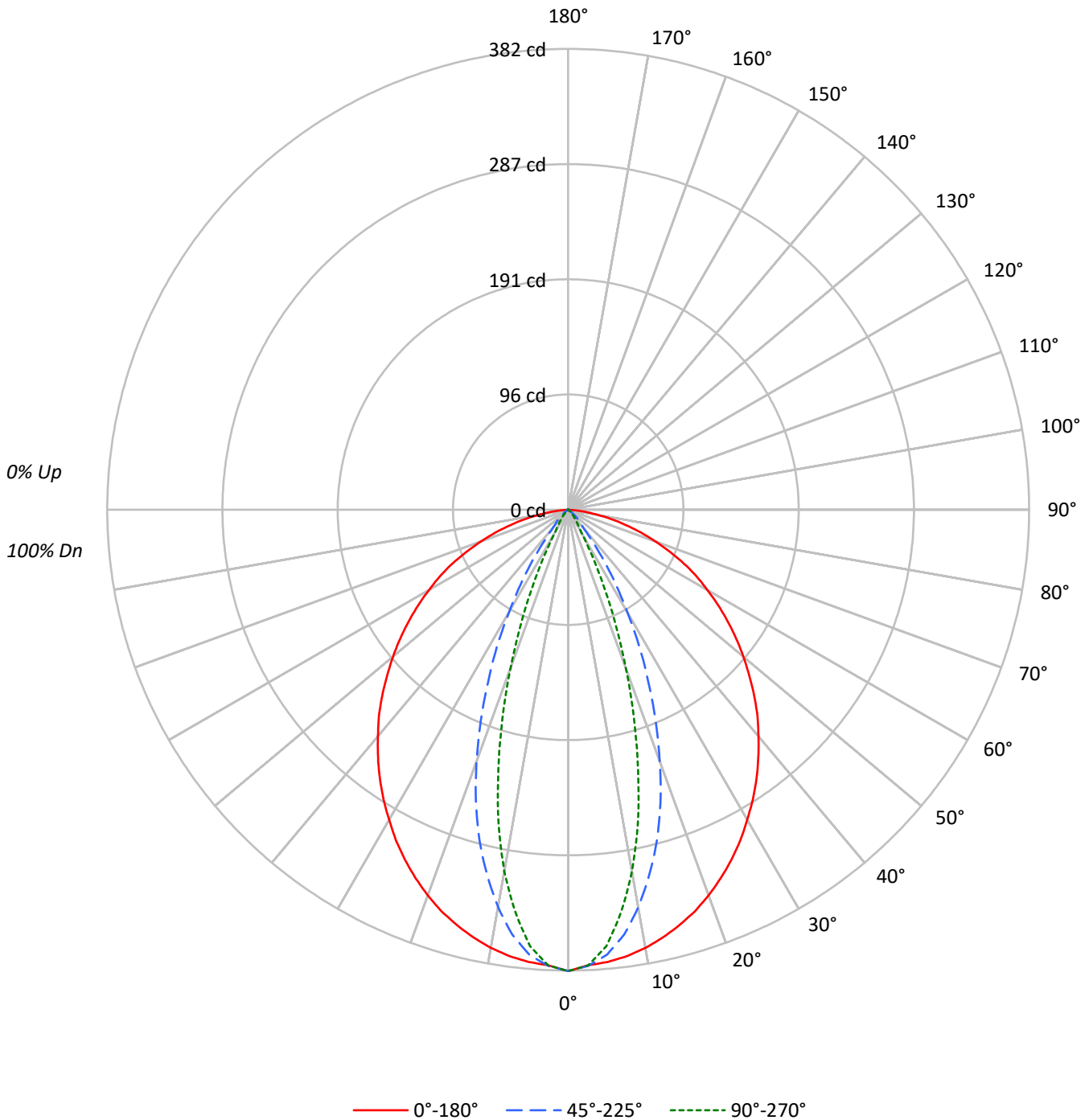
Lumens per Lamp: N/A
Luminaire Lumens: 347.9 lumens
Efficiency: N/A
Efficacy: 27.6 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	7245	7245	7245
5°	7157	7039	6906
10°	7095	6435	5860
15°	6992	5570	4388
20°	6859	4476	2809
25°	6689	3280	1442
30°	6491	2144	470
35°	6293	1189	275
40°	6067	477	153
45°	5841	319	59
50°	5582	183	27
55°	5328	86	13
60°	5047	34	0
65°	4747	18	0
70°	4260	22	0
75°	3667	29	0
80°	2782	0	0
85°	1152	87	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5841 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.3	9.9
10°-20°	79.7	22.9
20°-30°	80.9	23.2
30°-40°	60.7	17.4
40°-50°	42.5	12.2
50°-60°	26.0	7.5
60°-70°	15.5	4.4
70°-80°	7.1	2.0
80°-90°	1.3	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°	194.8	56.0
0°-40°	255.5	73.4
0°-60°	324.0	93.1
0°-90°	347.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	347.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	382	382	382	382	382	
5°	376	380	370	363	363	36
15°	356	337	284	240	224	100
25°	320	264	157	90	69	147
35°	272	177	51	15	12	170
45°	218	94	12	4	2	168
55°	161	29	3	1	0	144
65°	106	8	0	0	0	104
75°	50	1	0	0	0	53
85°	5	0	0	0	0	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	382.4	382.4	382.4	382.4	382.4
2.5°	378.0	383.7	378.5	377.6	378.0
5°	376.3	379.8	370.1	363.1	363.1
7.5°	373.2	373.2	355.2	340.7	336.3
10°	368.8	364.0	334.5	311.2	304.6
12.5°	363.1	351.6	310.3	277.4	266.8
15°	356.5	337.1	284.0	240.4	223.7
17.5°	349.0	320.9	254.5	200.4	181.1
20°	340.2	303.3	222.0	159.6	139.3
22.5°	330.5	284.0	189.0	123.1	101.5
25°	320.0	263.7	156.9	89.7	69.0
27.5°	309.0	242.6	127.5	61.5	42.2
30°	296.7	220.7	98.0	36.5	21.5
32.5°	284.8	199.6	73.4	19.8	15.8
35°	272.1	177.1	51.4	15.4	11.9
37.5°	258.9	156.0	31.6	11.4	8.8
40°	245.3	134.5	19.3	8.4	6.2
42.5°	232.1	114.3	15.4	5.7	4.0
45°	218.0	93.6	11.9	3.5	2.2
47.5°	203.5	74.7	8.8	2.2	1.3
50°	189.4	58.0	6.2	1.3	0.9
52.5°	175.4	42.6	4.0	0.9	0.4
55°	161.3	28.6	2.6	0.9	0.4
57.5°	147.3	20.2	1.8	0.4	0.4
60°	133.2	15.8	0.9	0.4	0.0
62.5°	120.0	12.3	0.9	0.4	0.4
65°	105.9	8.4	0.4	0.4	0.0
67.5°	91.0	5.3	0.4	0.4	0.0
70°	76.9	3.1	0.4	0.4	0.0
72.5°	63.3	1.8	0.4	0.4	0.0
75°	50.1	0.9	0.4	0.4	0.0
77.5°	37.4	0.4	0.0	0.4	0.0
80°	25.5	0.0	0.0	0.4	0.0
82.5°	14.9	0.0	0.0	0.4	0.0
85°	5.3	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	13.09	14.35	13.46	14.66	14.98	0.00	0.00	0.00	0.00	0.00
	3H	16.83	17.95	17.22	18.28	18.65	0.00	0.00	0.00	0.00	0.00
	4H	18.15	19.19	18.55	19.54	19.92	0.00	0.00	0.00	0.00	0.00
	6H	19.00	19.96	19.42	20.33	20.72	0.00	0.00	0.00	0.00	0.00
	8H	19.21	20.12	19.64	20.51	20.91	0.00	0.00	0.00	0.00	0.00
	12H	19.28	20.14	19.71	20.52	20.95	0.00	0.00	0.00	0.00	0.00
4H	2H	12.85	13.89	13.25	14.24	14.62	0.00	0.00	0.00	0.00	0.00
	3H	16.59	17.44	17.00	17.85	18.25	0.00	0.00	0.00	0.00	0.00
	4H	17.88	18.65	18.32	19.07	19.51	0.00	0.00	0.00	0.00	0.00
	6H	18.80	19.46	19.27	19.91	20.37	0.00	0.00	0.00	0.00	0.00
	8H	19.06	19.67	19.53	20.12	20.59	0.00	0.00	0.00	0.00	0.00
	12H	19.16	19.70	19.65	20.18	20.66	0.00	0.00	0.00	0.00	0.00
8H	4H	17.74	18.35	18.21	18.80	19.27	0.00	0.00	0.00	0.00	0.00
	6H	18.64	19.14	19.14	19.63	20.12	0.00	0.00	0.00	0.00	0.00
	8H	18.90	19.34	19.42	19.86	20.35	0.00	0.00	0.00	0.00	0.00
	12H	19.02	19.40	19.53	19.90	20.47	0.00	0.00	0.00	0.00	0.00
12H	4H	17.69	18.23	18.18	18.71	19.19	0.00	0.00	0.00	0.00	0.00
	6H	18.58	19.02	19.10	19.54	20.03	0.00	0.00	0.00	0.00	0.00
	8H	18.85	19.24	19.37	19.74	20.31	0.00	0.00	0.00	0.00	0.00