

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: P1055170

Luminaire Tested: S122R3DR-S290D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055170
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-S290D830-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, 80 CRI LEDS
Ballast/Driver: -

Summary

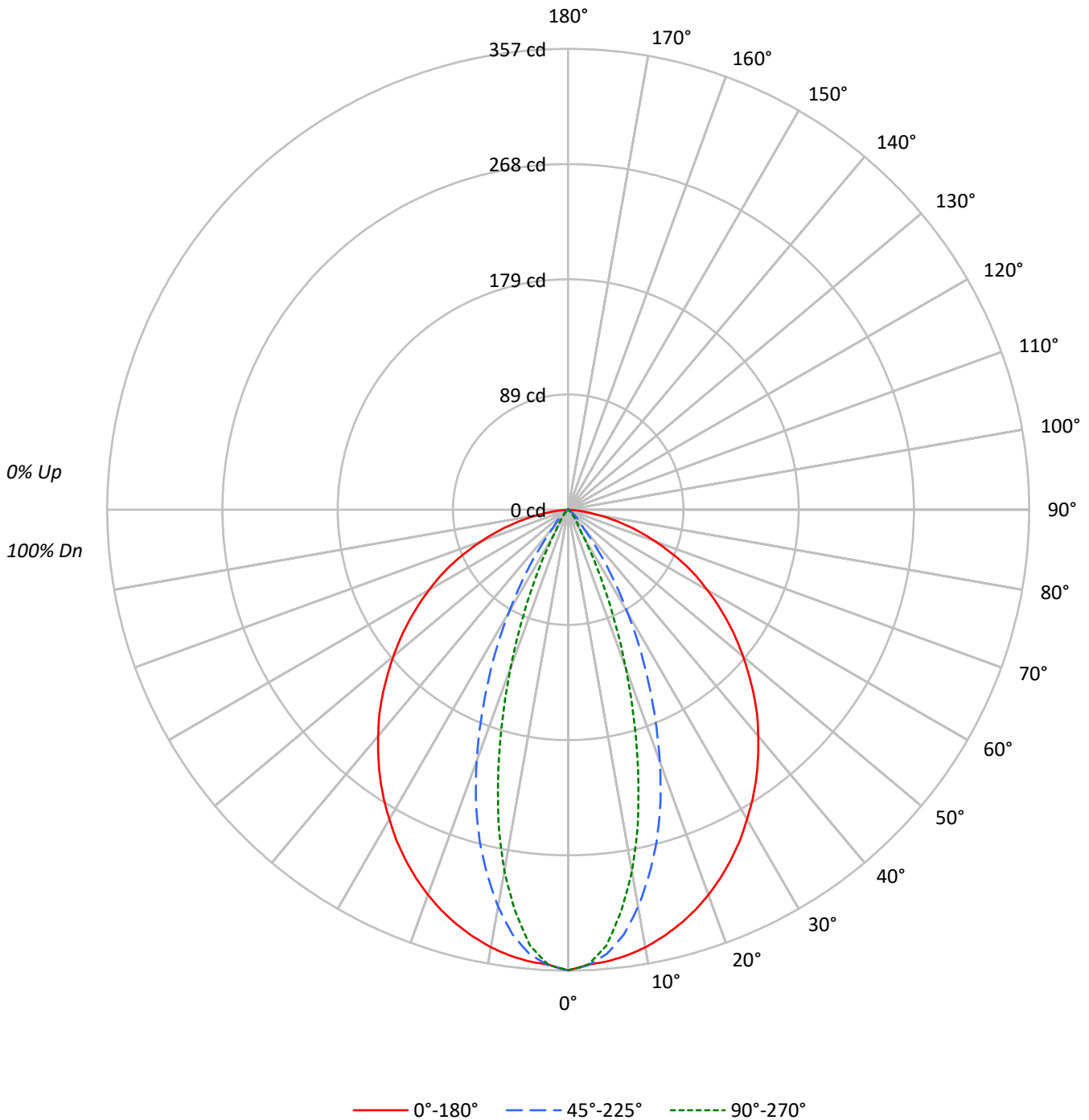
Lumens per Lamp: N/A
Luminaire Lumens: 324.7 lumens
Efficiency: N/A
Efficacy: 25.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	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	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	63	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	70	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	48	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6762	6762	6762
5°	6679	6569	6445
10°	6622	6006	5469
15°	6526	5198	4095
20°	6401	4178	2621
25°	6244	3062	1346
30°	6058	2002	440
35°	5872	1110	257
40°	5661	448	141
45°	5452	297	56
50°	5211	168	24
55°	4974	83	13
60°	4710	30	0
65°	4434	18	0
70°	3977	22	0
75°	3426	29	0
80°	2597	0	0
85°	1065	87	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5452 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.0	9.9
10°-20°	74.3	22.9
20°-30°	75.5	23.2
30°-40°	56.6	17.4
40°-50°	39.7	12.2
50°-60°	24.3	7.5
60°-70°	14.5	4.5
70°-80°	6.7	2.1
80°-90°	1.2	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°	181.8	56.0
0°-40°	238.5	73.4
0°-60°	302.4	93.1
0°-90°	324.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	324.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	357	357	357	357	357	
5°	351	354	345	339	339	33
15°	333	315	265	224	209	94
25°	299	246	146	84	64	137
35°	254	165	48	14	11	159
45°	204	87	11	3	2	157
55°	151	27	2	1	0	135
65°	99	8	0	0	0	97
75°	47	1	0	0	0	50
85°	5	0	0	0	0	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	356.9	356.9	356.9	356.9	356.9
2.5°	352.8	358.2	353.2	352.4	352.8
5°	351.2	354.5	345.4	338.9	338.9
7.5°	348.3	348.3	331.5	317.9	313.8
10°	344.2	339.7	312.2	290.5	284.3
12.5°	338.9	328.2	289.6	258.9	249.0
15°	332.7	314.7	265.0	224.4	208.8
17.5°	325.7	299.5	237.5	187.1	169.0
20°	317.5	283.1	207.2	148.9	130.0
22.5°	308.5	265.0	176.4	114.9	94.8
25°	298.7	246.2	146.5	83.7	64.4
27.5°	288.4	226.5	119.0	57.4	39.4
30°	276.9	205.9	91.5	34.1	20.1
32.5°	265.8	186.3	68.5	18.5	14.8
35°	253.9	165.3	48.0	14.4	11.1
37.5°	241.6	145.6	29.5	10.7	8.2
40°	228.9	125.5	18.1	7.8	5.7
42.5°	216.6	106.7	14.4	5.3	3.7
45°	203.5	87.4	11.1	3.3	2.1
47.5°	189.9	69.7	8.2	2.1	1.2
50°	176.8	54.2	5.7	1.2	0.8
52.5°	163.7	39.8	3.7	0.8	0.4
55°	150.6	26.7	2.5	0.8	0.4
57.5°	137.4	18.9	1.6	0.4	0.4
60°	124.3	14.8	0.8	0.4	0.0
62.5°	112.0	11.5	0.8	0.4	0.4
65°	98.9	7.8	0.4	0.4	0.0
67.5°	84.9	4.9	0.4	0.4	0.0
70°	71.8	2.9	0.4	0.4	0.0
72.5°	59.1	1.6	0.4	0.4	0.0
75°	46.8	0.8	0.4	0.4	0.0
77.5°	34.9	0.4	0.0	0.4	0.0
80°	23.8	0.0	0.0	0.4	0.0
82.5°	13.9	0.0	0.0	0.4	0.0
85°	4.9	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	12.86	14.12	13.22	14.43	14.74	0.00	0.00	0.00	0.00	0.00
	3H	16.59	17.71	16.97	18.04	18.41	0.00	0.00	0.00	0.00	0.00
	4H	17.91	18.95	18.31	19.30	19.68	0.00	0.00	0.00	0.00	0.00
	6H	18.76	19.72	19.18	20.09	20.48	0.00	0.00	0.00	0.00	0.00
	8H	18.97	19.88	19.40	20.27	20.67	0.00	0.00	0.00	0.00	0.00
	12H	19.04	19.90	19.47	20.28	20.71	0.00	0.00	0.00	0.00	0.00
4H	2H	12.61	13.65	13.01	14.00	14.39	0.00	0.00	0.00	0.00	0.00
	3H	16.35	17.20	16.76	17.61	18.01	0.00	0.00	0.00	0.00	0.00
	4H	17.64	18.41	18.08	18.83	19.27	0.00	0.00	0.00	0.00	0.00
	6H	18.56	19.22	19.03	19.67	20.13	0.00	0.00	0.00	0.00	0.00
	8H	18.82	19.43	19.29	19.88	20.35	0.00	0.00	0.00	0.00	0.00
	12H	18.92	19.46	19.41	19.94	20.42	0.00	0.00	0.00	0.00	0.00
8H	4H	17.50	18.11	17.97	18.56	19.03	0.00	0.00	0.00	0.00	0.00
	6H	18.40	18.90	18.90	19.39	19.88	0.00	0.00	0.00	0.00	0.00
	8H	18.66	19.10	19.18	19.62	20.11	0.00	0.00	0.00	0.00	0.00
	12H	18.77	19.16	19.29	19.66	20.23	0.00	0.00	0.00	0.00	0.00
12H	4H	17.45	17.99	17.94	18.47	18.95	0.00	0.00	0.00	0.00	0.00
	6H	18.34	18.78	18.86	19.30	19.79	0.00	0.00	0.00	0.00	0.00
	8H	18.61	19.00	19.13	19.50	20.07	0.00	0.00	0.00	0.00	0.00