

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: P1055173

Luminaire Tested: S122R3DR-S290D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055173
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-S290D835-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

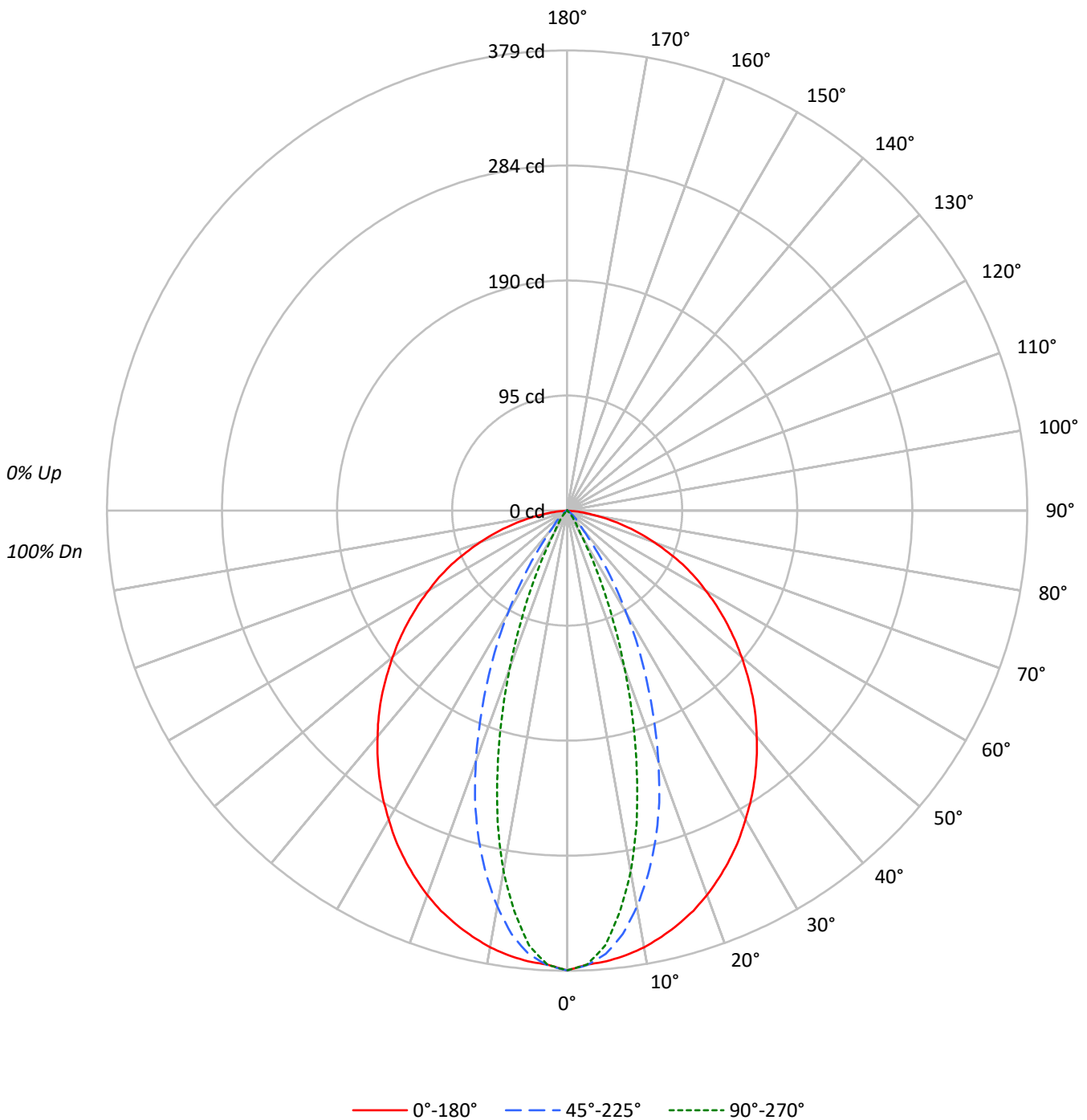
Lumens per Lamp: N/A
Luminaire Lumens: 344.5 lumens
Efficiency: N/A
Efficacy: 27.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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	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°	7175	7175	7175
5°	7086	6970	6837
10°	7026	6372	5802
15°	6924	5516	4345
20°	6792	4432	2782
25°	6625	3249	1428
30°	6427	2124	466
35°	6231	1177	273
40°	6007	475	151
45°	5785	316	59
50°	5529	180	27
55°	5275	86	13
60°	4998	34	0
65°	4703	18	0
70°	4221	22	0
75°	3631	29	0
80°	2749	0	0
85°	1130	87	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5785 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.9	9.9
10°-20°	78.9	22.9
20°-30°	80.1	23.2
30°-40°	60.1	17.4
40°-50°	42.1	12.2
50°-60°	25.7	7.5
60°-70°	15.3	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°	192.9	56.0
0°-40°	253.0	73.4
0°-60°	320.8	93.1
0°-90°	344.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	344.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	379	379	379	379	379	
5°	373	376	366	360	360	35
15°	353	334	281	238	222	99
25°	317	261	155	89	68	146
35°	269	175	51	15	12	168
45°	216	93	12	4	2	166
55°	160	28	3	1	0	143
65°	105	8	0	0	0	103
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°	378.7	378.7	378.7	378.7	378.7
2.5°	374.3	380.0	374.8	373.9	374.3
5°	372.6	376.1	366.5	359.5	359.5
7.5°	369.5	369.5	351.7	337.3	333.0
10°	365.2	360.4	331.2	308.2	301.6
12.5°	359.5	348.2	307.3	274.6	264.2
15°	353.0	333.8	281.2	238.1	221.5
17.5°	345.6	317.7	252.0	198.5	179.3
20°	336.9	300.3	219.8	158.0	138.0
22.5°	327.3	281.2	187.2	121.9	100.5
25°	316.9	261.2	155.4	88.8	68.3
27.5°	306.0	240.3	126.2	60.9	41.8
30°	293.8	218.5	97.1	36.1	21.3
32.5°	282.0	197.6	72.7	19.6	15.7
35°	269.4	175.4	50.9	15.2	11.8
37.5°	256.4	154.5	31.3	11.3	8.7
40°	242.9	133.2	19.2	8.3	6.1
42.5°	229.8	113.2	15.2	5.7	3.9
45°	215.9	92.7	11.8	3.5	2.2
47.5°	201.5	74.0	8.7	2.2	1.3
50°	187.6	57.5	6.1	1.3	0.9
52.5°	173.7	42.2	3.9	0.9	0.4
55°	159.7	28.3	2.6	0.9	0.4
57.5°	145.8	20.0	1.7	0.4	0.4
60°	131.9	15.7	0.9	0.4	0.0
62.5°	118.8	12.2	0.9	0.4	0.4
65°	104.9	8.3	0.4	0.4	0.0
67.5°	90.1	5.2	0.4	0.4	0.0
70°	76.2	3.0	0.4	0.4	0.0
72.5°	62.7	1.7	0.4	0.4	0.0
75°	49.6	0.9	0.4	0.4	0.0
77.5°	37.0	0.4	0.0	0.4	0.0
80°	25.2	0.0	0.0	0.4	0.0
82.5°	14.8	0.0	0.0	0.4	0.0
85°	5.2	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	13.06	14.32	13.42	14.63	14.94	0.00	0.00	0.00	0.00	0.00
	3H	16.80	17.92	17.18	18.25	18.61	0.00	0.00	0.00	0.00	0.00
	4H	18.11	19.15	18.51	19.50	19.89	0.00	0.00	0.00	0.00	0.00
	6H	18.96	19.92	19.38	20.29	20.68	0.00	0.00	0.00	0.00	0.00
	8H	19.18	20.08	19.61	20.47	20.88	0.00	0.00	0.00	0.00	0.00
	12H	19.24	20.10	19.67	20.49	20.92	0.00	0.00	0.00	0.00	0.00
4H	2H	12.81	13.85	13.21	14.20	14.59	0.00	0.00	0.00	0.00	0.00
	3H	16.55	17.40	16.97	17.81	18.21	0.00	0.00	0.00	0.00	0.00
	4H	17.85	18.61	18.28	19.03	19.47	0.00	0.00	0.00	0.00	0.00
	6H	18.77	19.42	19.23	19.87	20.34	0.00	0.00	0.00	0.00	0.00
	8H	19.02	19.64	19.49	20.08	20.56	0.00	0.00	0.00	0.00	0.00
	12H	19.13	19.66	19.61	20.15	20.62	0.00	0.00	0.00	0.00	0.00
8H	4H	17.70	18.31	18.17	18.76	19.23	0.00	0.00	0.00	0.00	0.00
	6H	18.60	19.10	19.11	19.60	20.08	0.00	0.00	0.00	0.00	0.00
	8H	18.86	19.30	19.38	19.82	20.31	0.00	0.00	0.00	0.00	0.00
	12H	18.98	19.37	19.49	19.86	20.44	0.00	0.00	0.00	0.00	0.00
12H	4H	17.65	18.19	18.14	18.68	19.15	0.00	0.00	0.00	0.00	0.00
	6H	18.54	18.98	19.06	19.50	19.99	0.00	0.00	0.00	0.00	0.00
	8H	18.82	19.20	19.33	19.70	20.27	0.00	0.00	0.00	0.00	0.00