

Scaled data based on original data using  
LM-79-2019 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-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
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-FLL-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: -

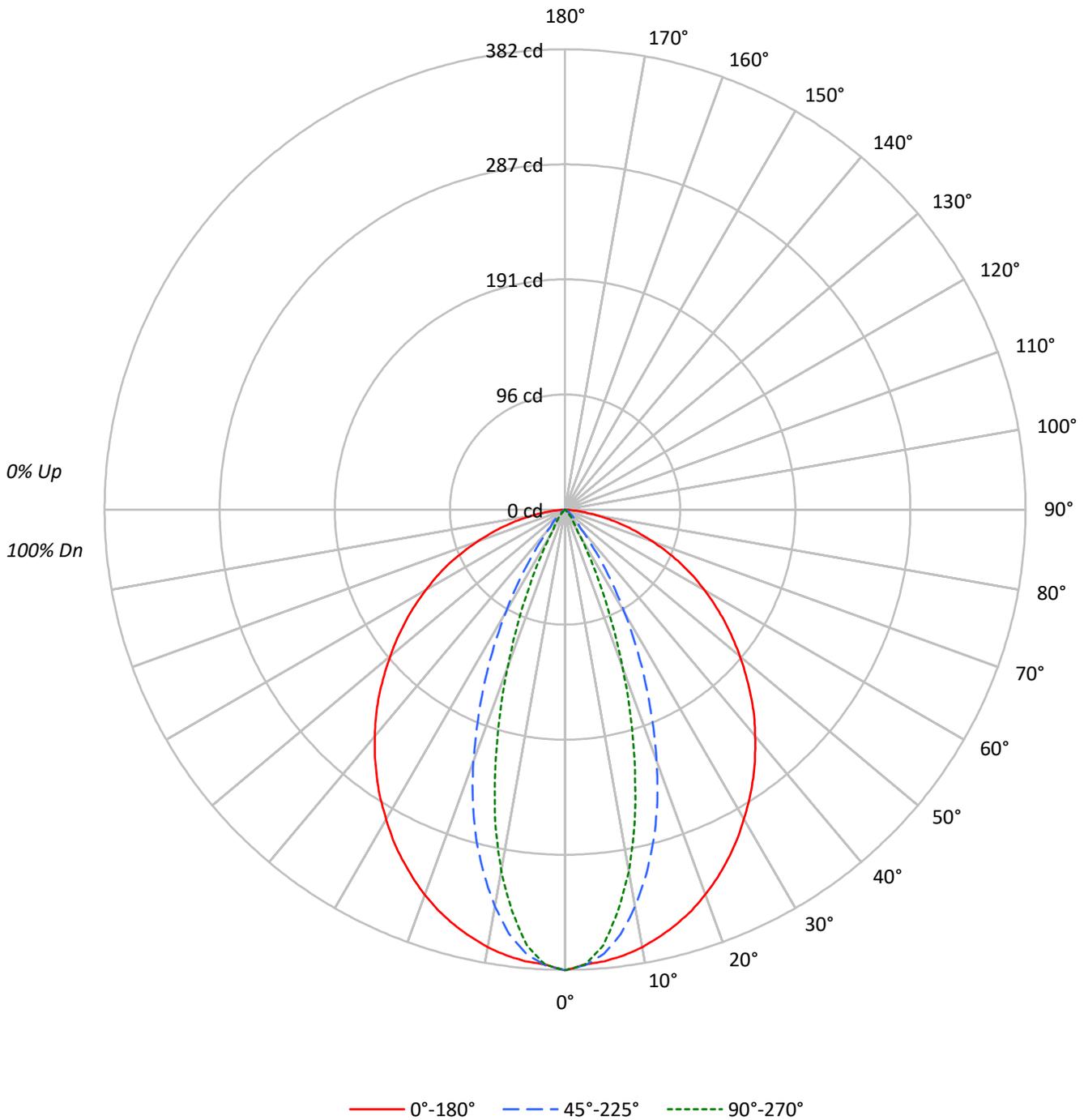
**Summary**

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 (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

TEST NUMBER: P1055176

CATALOG NUMBER: S122R3DR-S290D840-X4F0-XX-UDD-FLL-B

### Luminous Intensity Polar Plot





TEST NUMBER: P1055176

CATALOG NUMBER: S122R3DR-S290D840-X4F0-XX-UDD-FLL-B

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	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	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



TEST NUMBER: P1055176

CATALOG NUMBER: S122R3DR-S290D840-X4F0-XX-UDD-FLL-B

**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	



TEST NUMBER: P1055176

CATALOG NUMBER: S122R3DR-S290D840-X4F0-XX-UDD-FLL-B

**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

(END OF REPORT)