

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: P1055196

Luminaire Tested: S122R3DR-S290D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055196  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S290D950-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

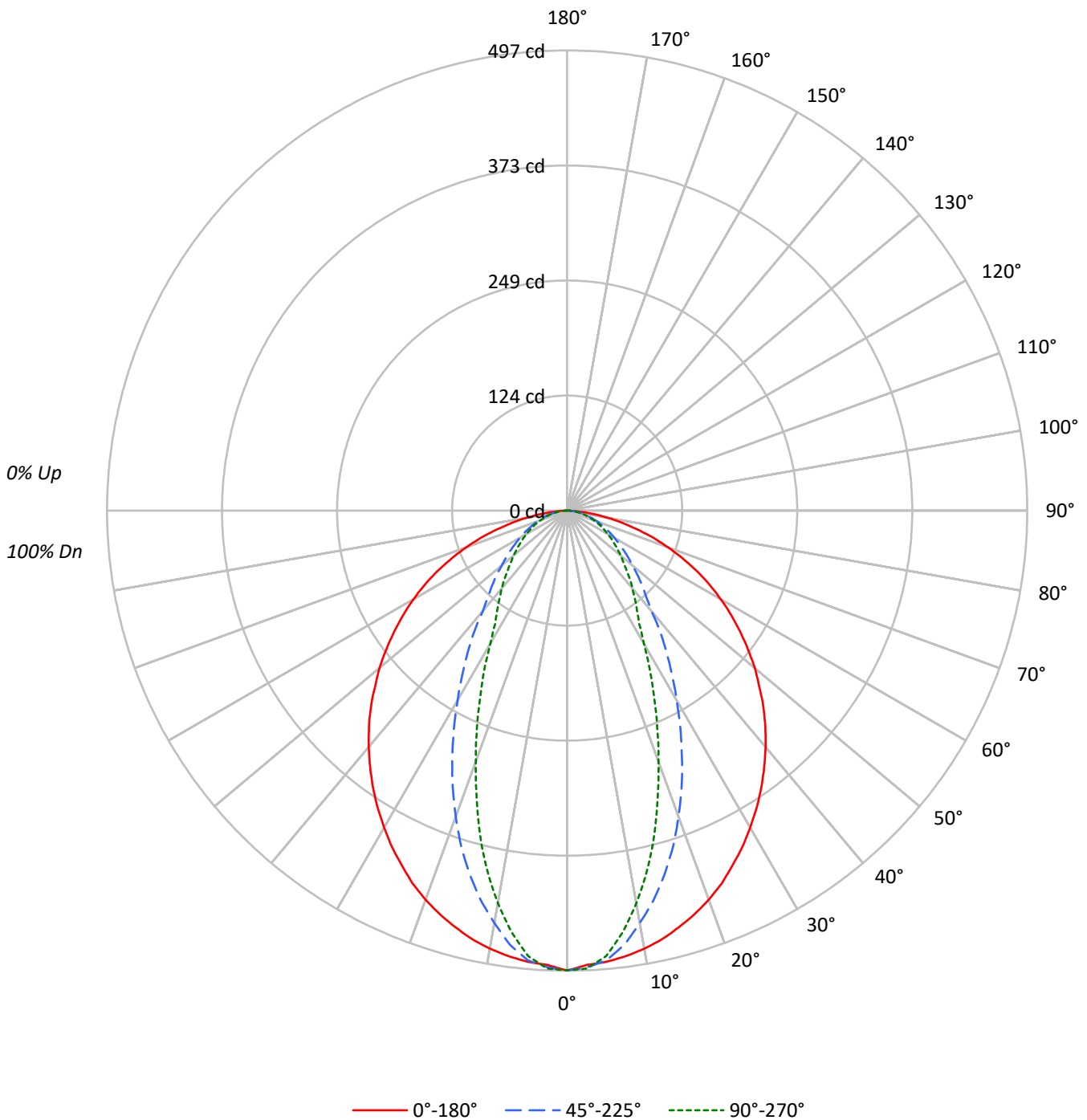
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 751.2 lumens  
Efficiency: N/A  
Efficacy: 59.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
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<sub>in</sub>): 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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89				87	
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77				75	
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68				66	
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60				58	
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54				52	
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48				46	
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44				42	
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40				38	
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37				35	
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34				32	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9409	9409	9409
5°	9302	9271	9184
10°	9242	8699	8284
15°	9138	7973	7126
20°	9016	7091	5819
25°	8836	6129	4645
30°	8648	5178	3625
35°	8451	4332	3044
40°	8246	3512	2711
45°	8033	3071	2425
50°	7796	2718	2216
55°	7531	2454	2058
60°	7268	2236	1921
65°	6926	2049	1807
70°	6420	1911	1701
75°	5680	1735	1610
80°	4844	1626	1495
85°	3348	1435	1348

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8033 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	45.5	6.1
10°-20°	114.9	15.3
20°-30°	141.6	18.8
30°-40°	135.8	18.1
40°-50°	117.2	15.6
50°-60°	90.9	12.1
60°-70°	62.2	8.3
70°-80°	33.8	4.5
80°-90°	9.3	1.2
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°	302.0	40.2
0°-40°	437.8	58.3
0°-60°	645.9	86.0
0°-90°	751.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	751.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	497	497	497	497	497	
5°	489	496	488	481	483	46
15°	466	452	406	373	363	131
25°	423	378	293	239	222	195
35°	365	290	187	140	132	229
45°	300	202	115	95	90	231
55°	228	121	74	64	62	204
65°	154	66	46	42	40	153
75°	78	30	24	22	22	83
85°	15	8	7	7	6	20
90°	0	0	0	0	0	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	496.6	496.6	496.6	496.6	496.6
2.5°	491.2	499.5	493.7	493.7	495.0
5°	489.1	496.2	487.5	481.3	482.9
7.5°	485.4	490.4	473.0	459.7	459.3
10°	480.4	480.8	452.2	434.8	430.6
12.5°	474.2	467.6	431.0	404.9	398.6
15°	465.9	451.8	406.5	373.3	363.3
17.5°	457.2	435.6	380.4	338.8	325.1
20°	447.2	416.1	351.7	304.4	288.6
22.5°	436.0	397.4	323.1	271.1	254.5
25°	422.7	377.5	293.2	239.2	222.2
27.5°	409.8	357.1	264.5	210.9	193.5
30°	395.3	335.1	236.7	183.9	165.7
32.5°	380.8	312.7	210.9	158.2	144.5
35°	365.4	289.8	187.3	139.5	131.6
37.5°	349.6	267.4	164.8	127.1	120.0
40°	333.4	245.0	142.0	115.0	109.6
42.5°	316.8	223.0	126.2	105.1	100.1
45°	299.8	201.8	114.6	94.7	90.5
47.5°	281.5	180.6	103.4	86.0	82.2
50°	264.5	160.3	92.2	78.1	75.2
52.5°	246.2	140.4	83.0	71.0	68.5
55°	228.0	121.2	74.3	64.4	62.3
57.5°	210.1	103.0	66.0	58.1	56.5
60°	191.8	88.4	59.0	52.3	50.7
62.5°	173.2	76.8	52.3	46.9	45.3
65°	154.5	66.0	45.7	41.5	40.3
67.5°	135.0	55.6	39.9	36.5	35.7
70°	115.9	46.5	34.5	31.6	30.7
72.5°	97.2	37.8	29.1	27.0	26.2
75°	77.6	30.3	23.7	22.4	22.0
77.5°	60.6	23.7	19.1	18.3	17.9
80°	44.4	17.4	14.9	14.1	13.7
82.5°	29.5	12.0	10.8	10.4	10.0
85°	15.4	7.5	6.6	6.6	6.2
87.5°	5.0	3.3	3.3	3.3	2.9
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	17.40	18.87	17.76	19.18	19.49	12.20	13.67	12.57	13.98	14.30
	3H	19.73	21.04	20.11	21.37	21.73	13.85	15.16	14.23	15.49	15.86
	4H	20.62	21.86	21.02	22.21	22.59	14.48	15.72	14.88	16.07	16.45
	6H	21.28	22.42	21.70	22.79	23.18	14.98	16.12	15.39	16.49	16.88
	8H	21.49	22.58	21.92	22.97	23.37	15.15	16.23	15.58	16.62	17.03
	12H	21.61	22.65	22.04	23.03	23.46	15.27	16.30	15.70	16.69	17.12
4H	2H	17.41	18.65	17.81	19.00	19.38	12.92	14.15	13.32	14.50	14.88
	3H	19.83	20.85	20.24	21.25	21.65	14.77	15.79	15.18	16.19	16.59
	4H	20.76	21.68	21.19	22.09	22.53	15.51	16.44	15.95	16.85	17.29
	6H	21.53	22.33	21.99	22.78	23.24	16.13	16.93	16.59	17.37	17.84
	8H	21.80	22.55	22.27	23.00	23.47	16.35	17.10	16.81	17.54	18.01
	12H	21.98	22.65	22.46	23.13	23.60	16.51	17.17	16.99	17.65	18.13
8H	4H	20.75	21.50	21.21	21.94	22.41	15.89	16.64	16.36	17.09	17.55
	6H	21.56	22.17	22.05	22.67	23.14	16.63	17.25	17.13	17.74	18.22
	8H	21.86	22.41	22.37	22.92	23.41	16.93	17.48	17.44	17.99	18.48
	12H	22.09	22.58	22.60	23.07	23.64	17.17	17.66	17.68	18.15	18.72
12H	4H	20.73	21.40	21.21	21.88	22.35	15.95	16.62	16.43	17.10	17.57
	6H	21.53	22.09	22.05	22.60	23.09	16.72	17.27	17.23	17.78	18.27
	8H	21.86	22.35	22.38	22.85	23.41	17.07	17.56	17.58	18.05	18.62