

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: P1055190

Luminaire Tested: S122R3DR-S290D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055190
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-S290D935-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

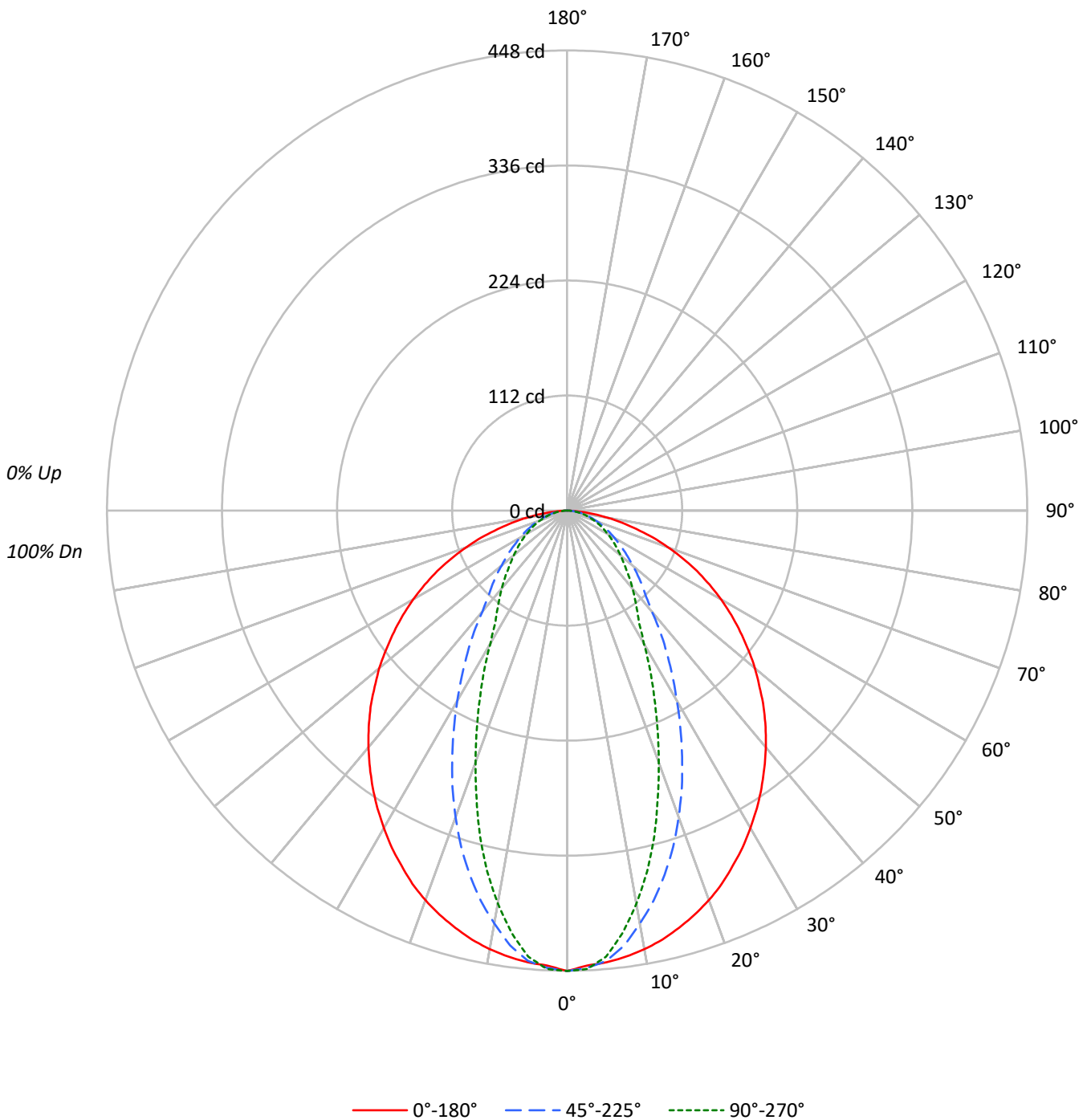
Lumens per Lamp: N/A
Luminaire Lumens: 677.9 lumens
Efficiency: N/A
Efficacy: 53.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (A_{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	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				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8492	8492	8492
5°	8397	8368	8288
10°	8342	7851	7476
15°	8248	7196	6431
20°	8137	6399	5252
25°	7975	5531	4191
30°	7806	4673	3271
35°	7628	3909	2748
40°	7442	3171	2446
45°	7250	2770	2189
50°	7036	2452	1998
55°	6794	2216	1856
60°	6559	2016	1732
65°	6249	1847	1632
70°	5794	1723	1534
75°	5131	1567	1457
80°	4375	1473	1353
85°	3022	1304	1217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7250 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.1	6.1
10°-20°	103.7	15.3
20°-30°	127.8	18.8
30°-40°	122.6	18.1
40°-50°	105.7	15.6
50°-60°	82.0	12.1
60°-70°	56.2	8.3
70°-80°	30.5	4.5
80°-90°	8.4	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°	272.5	40.2
0°-40°	395.1	58.3
0°-60°	582.9	86.0
0°-90°	677.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	677.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	448	448	448	448	448	
5°	442	448	440	434	436	42
15°	420	408	367	337	328	119
25°	382	341	265	216	200	176
35°	330	262	169	126	119	206
45°	271	182	103	85	82	209
55°	206	109	67	58	56	184
65°	139	60	41	38	36	138
75°	70	27	21	20	20	75
85°	14	7	6	6	6	18
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	448.2	448.2	448.2	448.2	448.2
2.5°	443.3	450.8	445.6	445.6	446.7
5°	441.5	447.8	440.0	434.3	435.8
7.5°	438.1	442.6	426.8	414.9	414.5
10°	433.6	434.0	408.1	392.4	388.6
12.5°	428.0	422.0	389.0	365.4	359.8
15°	420.5	407.7	366.9	336.9	327.9
17.5°	412.6	393.1	343.3	305.8	293.4
20°	403.6	375.5	317.4	274.7	260.5
22.5°	393.5	358.6	291.6	244.7	229.7
25°	381.5	340.7	264.6	215.9	200.5
27.5°	369.9	322.3	238.7	190.4	174.6
30°	356.8	302.4	213.6	166.0	149.5
32.5°	343.7	282.2	190.4	142.8	130.4
35°	329.8	261.6	169.0	125.9	118.8
37.5°	315.5	241.3	148.8	114.7	108.3
40°	300.9	221.1	128.2	103.8	98.9
42.5°	285.9	201.2	113.9	94.8	90.3
45°	270.6	182.1	103.4	85.4	81.7
47.5°	254.1	163.0	93.3	77.6	74.2
50°	238.7	144.7	83.2	70.5	67.8
52.5°	222.2	126.7	75.0	64.1	61.8
55°	205.7	109.4	67.1	58.1	56.2
57.5°	189.6	92.9	59.6	52.5	51.0
60°	173.1	79.8	53.2	47.2	45.7
62.5°	156.3	69.3	47.2	42.3	40.8
65°	139.4	59.6	41.2	37.5	36.4
67.5°	121.8	50.2	36.0	33.0	32.2
70°	104.6	42.0	31.1	28.5	27.7
72.5°	87.7	34.1	26.2	24.4	23.6
75°	70.1	27.4	21.4	20.2	19.9
77.5°	54.7	21.4	17.2	16.5	16.1
80°	40.1	15.7	13.5	12.7	12.4
82.5°	26.6	10.9	9.7	9.4	9.0
85°	13.9	6.7	6.0	6.0	5.6
87.5°	4.5	3.0	3.0	3.0	2.6
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	17.04	18.51	17.40	18.82	19.13	11.85	13.32	12.22	13.63	13.95
	3H	19.37	20.69	19.75	21.01	21.38	13.50	14.81	13.87	15.14	15.50
	4H	20.27	21.50	20.67	21.85	22.23	14.13	15.37	14.53	15.71	16.09
	6H	20.93	22.07	21.34	22.44	22.83	14.62	15.76	15.04	16.13	16.52
	8H	21.14	22.22	21.56	22.61	23.01	14.80	15.88	15.22	16.27	16.67
	12H	21.25	22.29	21.68	22.67	23.10	14.91	15.95	15.34	16.33	16.76
4H	2H	17.05	18.29	17.46	18.64	19.02	12.56	13.80	12.96	14.15	14.53
	3H	19.47	20.49	19.88	20.89	21.30	14.41	15.44	14.82	15.84	16.24
	4H	20.40	21.32	20.83	21.74	22.18	15.16	16.08	15.59	16.50	16.94
	6H	21.18	21.98	21.64	22.42	22.88	15.77	16.57	16.23	17.02	17.48
	8H	21.45	22.20	21.91	22.64	23.11	15.99	16.74	16.45	17.18	17.65
	12H	21.62	22.29	22.11	22.77	23.24	16.15	16.82	16.63	17.30	17.77
8H	4H	20.39	21.14	20.86	21.59	22.05	15.54	16.29	16.00	16.73	17.20
	6H	21.20	21.82	21.70	22.31	22.79	16.27	16.89	16.77	17.38	17.86
	8H	21.50	22.06	22.02	22.57	23.06	16.57	17.12	17.09	17.63	18.12
	12H	21.73	22.22	22.24	22.71	23.28	16.81	17.30	17.32	17.80	18.36
12H	4H	20.37	21.04	20.86	21.52	21.99	15.59	16.26	16.08	16.74	17.21
	6H	21.17	21.73	21.69	22.24	22.73	16.36	16.91	16.87	17.42	17.91
	8H	21.51	22.00	22.02	22.49	23.06	16.72	17.20	17.23	17.70	18.26