

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: P1055172

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055172
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-S290D830-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

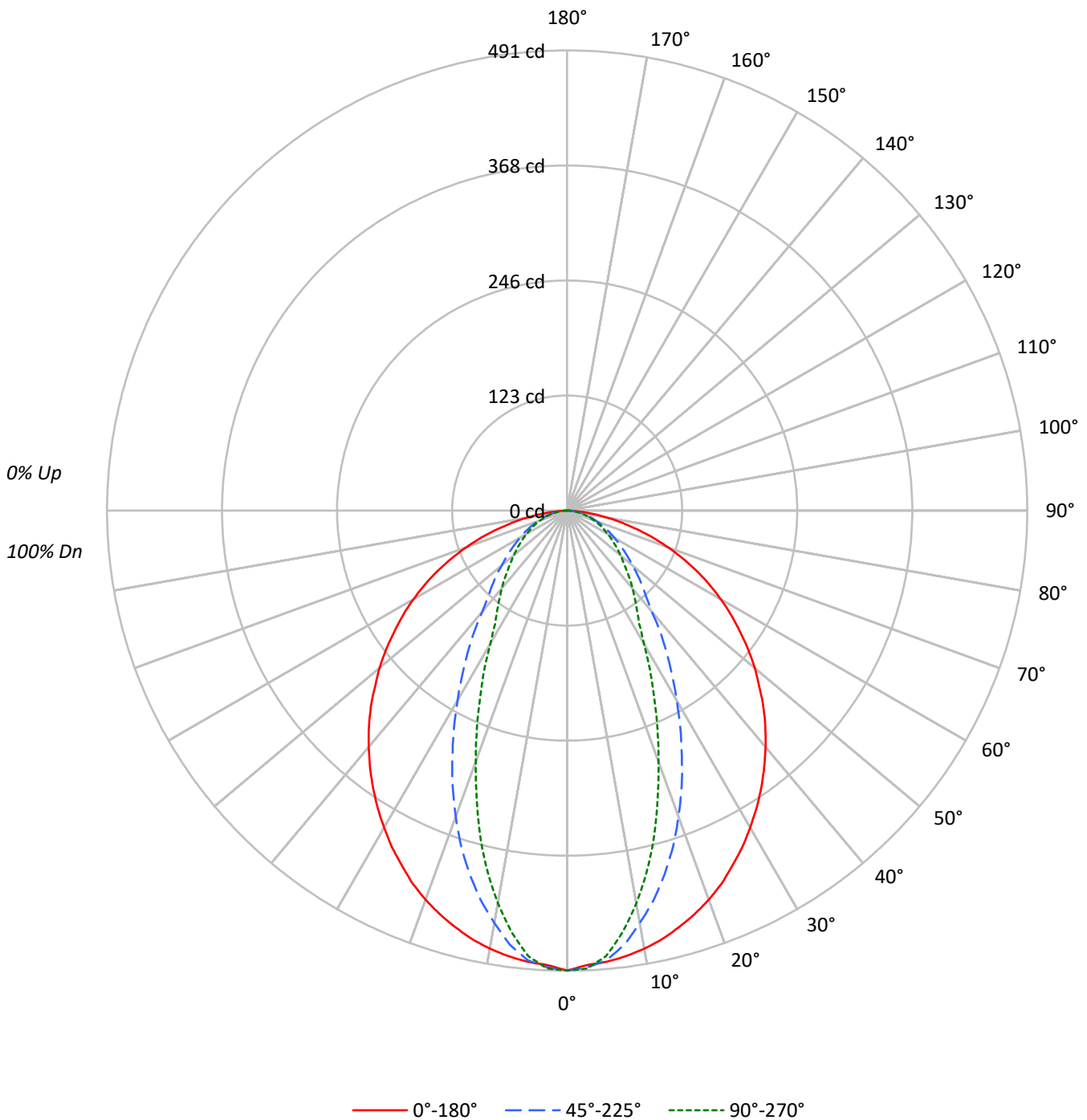
Lumens per Lamp: N/A
Luminaire Lumens: 742.2 lumens
Efficiency: N/A
Efficacy: 58.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	9297	9297	9297
5°	9192	9159	9074
10°	9132	8596	8184
15°	9028	7877	7041
20°	8907	7006	5748
25°	8730	6054	4589
30°	8545	5115	3581
35°	8349	4279	3007
40°	8147	3470	2678
45°	7936	3033	2395
50°	7702	2685	2190
55°	7439	2424	2031
60°	7180	2209	1898
65°	6841	2022	1784
70°	6343	1889	1684
75°	5615	1713	1588
80°	4790	1615	1473
85°	3304	1435	1348

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7936 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.0	6.1
10°-20°	113.5	15.3
20°-30°	139.9	18.8
30°-40°	134.2	18.1
40°-50°	115.8	15.6
50°-60°	89.8	12.1
60°-70°	61.5	8.3
70°-80°	33.4	4.5
80°-90°	9.2	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°	298.4	40.2
0°-40°	432.6	58.3
0°-60°	638.1	86.0
0°-90°	742.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	742.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	491	491	491	491	491	
5°	483	490	482	476	477	46
15°	460	446	402	369	359	130
25°	418	373	290	236	220	192
35°	361	286	185	138	130	226
45°	296	199	113	94	89	228
55°	225	120	73	64	62	202
65°	153	65	45	41	40	151
75°	77	30	23	22	22	82
85°	15	7	7	7	6	19
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	490.7	490.7	490.7	490.7	490.7
2.5°	485.3	493.5	487.8	487.8	489.0
5°	483.3	490.2	481.6	475.5	477.1
7.5°	479.6	484.5	467.3	454.1	453.7
10°	474.7	475.1	446.8	429.5	425.4
12.5°	468.5	461.9	425.8	400.0	393.8
15°	460.3	446.4	401.6	368.8	359.0
17.5°	451.7	430.4	375.8	334.8	321.2
20°	441.8	411.1	347.5	300.7	285.1
22.5°	430.8	392.6	319.2	267.9	251.5
25°	417.6	372.9	289.6	236.3	219.5
27.5°	404.9	352.8	261.3	208.4	191.2
30°	390.6	331.1	233.8	181.7	163.7
32.5°	376.2	308.9	208.4	156.3	142.8
35°	361.0	286.4	185.0	137.8	130.0
37.5°	345.4	264.2	162.9	125.5	118.6
40°	329.4	242.0	140.3	113.6	108.3
42.5°	313.0	220.3	124.7	103.8	98.9
45°	296.2	199.4	113.2	93.5	89.4
47.5°	278.1	178.5	102.2	84.9	81.2
50°	261.3	158.4	91.1	77.1	74.3
52.5°	243.3	138.7	82.0	70.2	67.7
55°	225.2	119.8	73.4	63.6	61.5
57.5°	207.6	101.7	65.2	57.4	55.8
60°	189.5	87.4	58.3	51.7	50.1
62.5°	171.1	75.9	51.7	46.4	44.7
65°	152.6	65.2	45.1	41.0	39.8
67.5°	133.3	55.0	39.4	36.1	35.3
70°	114.5	45.9	34.1	31.2	30.4
72.5°	96.0	37.3	28.7	26.7	25.8
75°	76.7	29.9	23.4	22.2	21.7
77.5°	59.9	23.4	18.9	18.1	17.6
80°	43.9	17.2	14.8	13.9	13.5
82.5°	29.1	11.9	10.7	10.3	9.8
85°	15.2	7.4	6.6	6.6	6.2
87.5°	4.9	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	17.35	18.82	17.72	19.14	19.45	12.16	13.63	12.52	13.94	14.25
	3H	19.68	21.00	20.06	21.33	21.69	13.81	15.12	14.19	15.45	15.82
	4H	20.58	21.81	20.98	22.16	22.54	14.44	15.68	14.84	16.03	16.41
	6H	21.24	22.38	21.65	22.75	23.14	14.93	16.07	15.35	16.44	16.83
	8H	21.45	22.53	21.88	22.92	23.33	15.10	16.19	15.53	16.58	16.98
	12H	21.57	22.60	22.00	22.99	23.41	15.22	16.26	15.65	16.64	17.07
4H	2H	17.37	18.60	17.77	18.95	19.33	12.87	14.11	13.27	14.46	14.84
	3H	19.78	20.81	20.19	21.21	21.61	14.72	15.75	15.14	16.15	16.55
	4H	20.71	21.63	21.14	22.05	22.49	15.47	16.39	15.91	16.81	17.25
	6H	21.49	22.29	21.95	22.73	23.20	16.09	16.89	16.54	17.33	17.79
	8H	21.76	22.51	22.22	22.95	23.42	16.30	17.05	16.77	17.49	17.96
	12H	21.94	22.61	22.42	23.08	23.56	16.46	17.13	16.95	17.61	18.08
8H	4H	20.70	21.45	21.17	21.90	22.37	15.85	16.60	16.32	17.05	17.51
	6H	21.51	22.13	22.01	22.62	23.10	16.59	17.21	17.09	17.70	18.18
	8H	21.81	22.37	22.33	22.88	23.37	16.88	17.44	17.40	17.95	18.44
	12H	22.05	22.53	22.56	23.03	23.59	17.13	17.62	17.64	18.11	18.68
12H	4H	20.69	21.35	21.17	21.83	22.30	15.91	16.58	16.39	17.06	17.53
	6H	21.49	22.04	22.00	22.55	23.04	16.67	17.23	17.19	17.74	18.23
	8H	21.82	22.31	22.33	22.80	23.37	17.03	17.52	17.54	18.01	18.58