

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: P1055181

Luminaire Tested: S122R3DR-S290D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055181
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-S290D850-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, 80 CRI LEDS
Ballast/Driver: -

Summary

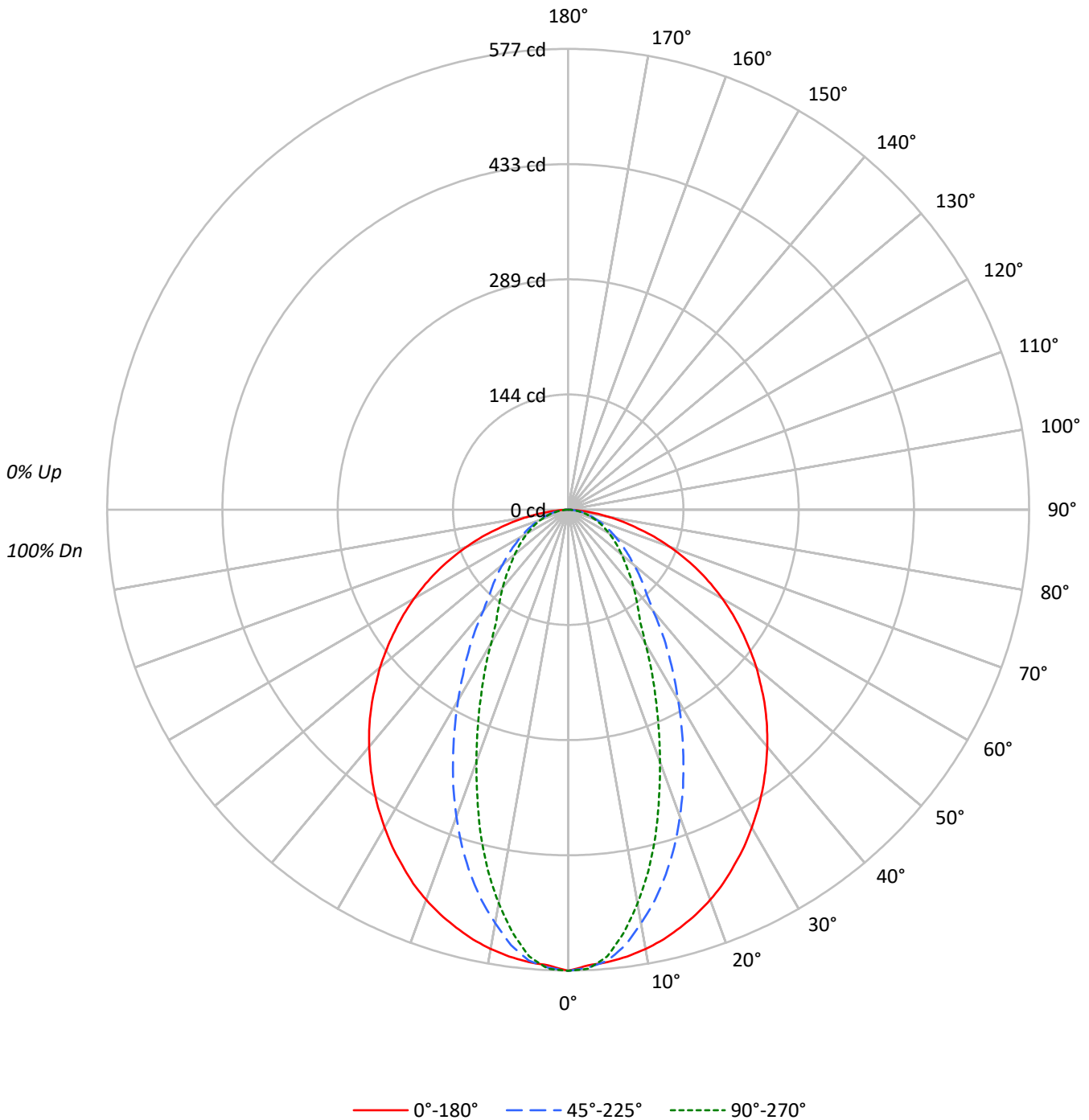
Lumens per Lamp: N/A
Luminaire Lumens: 873.2 lumens
Efficiency: N/A
Efficacy: 69.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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	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°	10937	10937	10937
5°	10814	10778	10677
10°	10744	10113	9631
15°	10623	9270	8285
20°	10482	8242	6764
25°	10272	7124	5398
30°	10052	6018	4213
35°	9825	5035	3539
40°	9586	4083	3151
45°	9338	3569	2819
50°	9063	3160	2576
55°	8753	2854	2391
60°	8450	2596	2232
65°	8051	2380	2098
70°	7462	2221	1978
75°	6610	2013	1874
80°	5630	1898	1735
85°	3891	1674	1565

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9338 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.9	6.1
10°-20°	133.6	15.3
20°-30°	164.6	18.8
30°-40°	157.9	18.1
40°-50°	136.2	15.6
50°-60°	105.6	12.1
60°-70°	72.3	8.3
70°-80°	39.3	4.5
80°-90°	10.8	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°	351.0	40.2
0°-40°	508.9	58.3
0°-60°	750.8	86.0
0°-90°	873.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	873.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	569	577	567	560	561	54
15°	542	525	473	434	422	153
25°	491	439	341	278	258	226
35°	425	337	218	162	153	266
45°	348	235	133	110	105	269
55°	265	141	86	75	72	237
65°	180	77	53	48	47	177
75°	90	35	28	26	26	97
85°	18	9	8	8	7	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	577.3	577.3	577.3	577.3	577.3
2.5°	571.0	580.7	573.9	573.9	575.4
5°	568.6	576.8	566.7	559.5	561.4
7.5°	564.3	570.1	549.8	534.4	533.9
10°	558.5	559.0	525.7	505.4	500.6
12.5°	551.2	543.5	501.0	470.6	463.4
15°	541.6	525.2	472.6	433.9	422.4
17.5°	531.5	506.4	442.2	393.9	378.0
20°	519.9	483.7	408.8	353.8	335.5
22.5°	506.8	461.9	375.5	315.2	295.9
25°	491.4	438.8	340.8	278.0	258.2
27.5°	476.4	415.1	307.5	245.2	224.9
30°	459.5	389.5	275.1	213.8	192.6
32.5°	442.6	363.5	245.2	183.9	168.0
35°	424.8	336.9	217.7	162.2	153.0
37.5°	406.4	310.9	191.6	147.7	139.5
40°	387.6	284.8	165.1	133.7	127.4
42.5°	368.3	259.2	146.7	122.1	116.3
45°	348.5	234.6	133.2	110.1	105.2
47.5°	327.3	210.0	120.2	99.9	95.6
50°	307.5	186.3	107.2	90.7	87.4
52.5°	286.2	163.2	96.5	82.5	79.6
55°	265.0	140.9	86.4	74.8	72.4
57.5°	244.2	119.7	76.7	67.6	65.6
60°	223.0	102.8	68.5	60.8	58.9
62.5°	201.3	89.3	60.8	54.5	52.6
65°	179.6	76.7	53.1	48.3	46.8
67.5°	156.9	64.7	46.3	42.5	41.5
70°	134.7	54.1	40.1	36.7	35.7
72.5°	113.0	43.9	33.8	31.4	30.4
75°	90.3	35.2	27.5	26.1	25.6
77.5°	70.5	27.5	22.2	21.2	20.8
80°	51.6	20.3	17.4	16.4	15.9
82.5°	34.3	14.0	12.6	12.1	11.6
85°	17.9	8.7	7.7	7.7	7.2
87.5°	5.8	3.9	3.9	3.9	3.4
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	17.92	19.39	18.28	19.70	20.02	12.73	14.19	13.09	14.51	14.82
	3H	20.25	21.57	20.63	21.90	22.26	14.37	15.69	14.75	16.02	16.38
	4H	21.15	22.38	21.55	22.73	23.11	15.01	16.24	15.41	16.59	16.97
	6H	21.81	22.95	22.22	23.32	23.71	15.50	16.64	15.92	17.01	17.40
	8H	22.02	23.10	22.44	23.49	23.89	15.67	16.76	16.10	17.15	17.55
	12H	22.13	23.17	22.56	23.55	23.98	15.79	16.83	16.22	17.21	17.64
4H	2H	17.94	19.17	18.34	19.52	19.90	13.44	14.68	13.84	15.03	15.41
	3H	20.35	21.37	20.76	21.77	22.18	15.29	16.32	15.70	16.72	17.12
	4H	21.28	22.20	21.71	22.62	23.06	16.04	16.96	16.47	17.38	17.82
	6H	22.06	22.86	22.51	23.30	23.76	16.65	17.45	17.11	17.90	18.36
	8H	22.33	23.08	22.79	23.52	23.99	16.87	17.62	17.33	18.06	18.53
	12H	22.50	23.17	22.99	23.65	24.12	17.03	17.70	17.51	18.18	18.65
8H	4H	21.27	22.02	21.74	22.47	22.93	16.42	17.17	16.88	17.61	18.08
	6H	22.08	22.70	22.58	23.19	23.67	17.15	17.77	17.65	18.26	18.74
	8H	22.38	22.94	22.90	23.45	23.93	17.45	18.00	17.97	18.51	19.00
	12H	22.61	23.10	23.12	23.59	24.16	17.69	18.18	18.20	18.67	19.24
12H	4H	21.25	21.92	21.74	22.40	22.87	16.47	17.14	16.96	17.62	18.09
	6H	22.05	22.61	22.57	23.12	23.61	17.24	17.79	17.76	18.31	18.79
	8H	22.39	22.88	22.90	23.37	23.94	17.60	18.09	18.11	18.58	19.14