

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: P1439684

Luminaire Tested: S122DR-S290D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439684
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S290D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

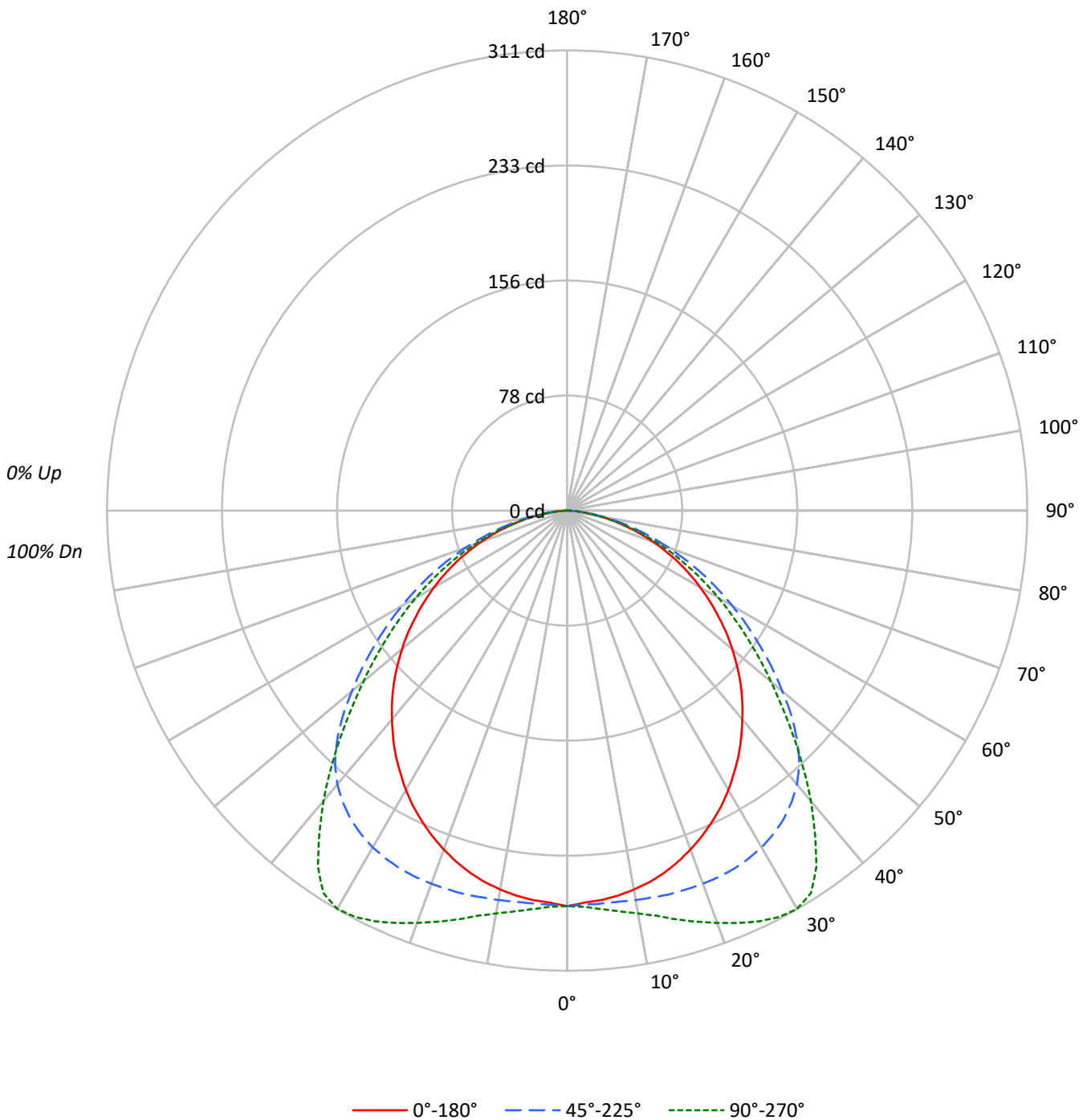
Lumens per Lamp: N/A
Luminaire Lumens: 822.2 lumens
Efficiency: N/A
Efficacy: 65.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5064	5064	5064
5°	5025	5070	5143
10°	5002	5142	5317
15°	4970	5264	5612
20°	4913	5411	5978
25°	4848	5581	6403
30°	4769	5749	6799
35°	4672	5893	6793
40°	4556	5975	6336
45°	4442	5895	5803
50°	4294	5594	5297
55°	4122	5249	4869
60°	3937	4888	4479
65°	3725	4505	4084
70°	3429	4027	3656
75°	3031	3484	3155
80°	2499	2771	2499
85°	1652	1804	1739

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5943 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.6	3.1
10°-20°	76.4	9.3
20°-30°	123.9	15.1
30°-40°	156.8	19.1
40°-50°	157.0	19.1
50°-60°	131.5	16.0
60°-70°	92.7	11.3
70°-80°	47.8	5.8
80°-90°	10.6	1.3
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°	225.8	27.5
0°-40°	382.6	46.5
0°-60°	671.1	81.6
0°-90°	822.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	822.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	267	267	267	267	267	
5°	264	269	267	268	270	25
15°	253	261	268	279	286	71
25°	232	244	267	293	306	107
35°	202	218	255	288	294	126
45°	166	183	220	222	217	128
55°	125	140	159	152	147	112
65°	83	92	100	94	91	82
75°	41	46	48	44	43	44
85°	8	8	8	8	8	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	267.3	267.3	267.3	267.3	267.3
2.5°	265.2	269.4	266.6	267.0	268.0
5°	264.2	268.7	266.6	268.0	270.4
7.5°	262.5	267.3	266.6	269.4	273.2
10°	260.0	265.6	267.3	272.2	276.4
12.5°	257.2	263.1	267.7	275.3	280.5
15°	253.4	260.7	268.4	279.1	286.1
17.5°	248.9	257.6	268.4	283.3	291.3
20°	243.7	253.8	268.4	286.8	296.5
22.5°	238.1	249.2	268.0	289.9	301.7
25°	231.9	244.4	267.0	293.0	306.3
27.5°	225.3	238.8	265.2	295.5	309.7
30°	218.0	232.6	262.8	296.5	310.8
32.5°	210.0	226.0	259.3	294.4	306.6
35°	202.0	218.3	254.8	287.8	293.7
37.5°	193.3	210.3	248.9	275.0	275.0
40°	184.2	201.6	241.6	257.2	256.2
42.5°	175.2	192.6	232.2	239.9	236.4
45°	165.8	183.2	220.0	221.8	216.6
47.5°	155.7	172.8	205.8	203.4	197.4
50°	145.7	162.3	189.8	185.6	179.7
52.5°	135.6	151.6	174.5	168.6	163.4
55°	124.8	140.1	158.9	152.3	147.4
57.5°	114.4	128.6	143.9	136.6	132.4
60°	103.9	116.8	129.0	122.0	118.2
62.5°	93.5	104.6	114.7	107.8	104.3
65°	83.1	92.5	100.5	94.2	91.1
67.5°	72.3	80.6	86.2	80.6	78.6
70°	61.9	68.5	72.7	67.8	66.0
72.5°	51.4	57.0	59.8	56.0	54.2
75°	41.4	45.5	47.6	44.1	43.1
77.5°	31.6	34.8	35.8	33.4	32.0
80°	22.9	24.7	25.4	23.6	22.9
82.5°	14.3	15.6	16.3	14.9	14.6
85°	7.6	8.3	8.3	8.3	8.0
87.5°	2.8	3.5	3.5	3.5	3.1
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	17.12	18.73	17.49	19.05	19.36	17.63	19.25	18.00	19.56	19.87
	3H	18.69	20.14	19.07	20.47	20.83	19.10	20.55	19.48	20.88	21.24
	4H	19.23	20.59	19.63	20.94	21.32	19.59	20.96	19.99	21.31	21.68
	6H	19.57	20.84	19.98	21.20	21.59	19.89	21.16	20.31	21.52	21.91
	8H	19.65	20.86	20.08	21.25	21.65	19.97	21.17	20.39	21.56	21.96
	12H	19.69	20.85	20.12	21.23	21.66	20.00	21.16	20.43	21.54	21.97
4H	2H	17.88	19.24	18.27	19.59	19.97	18.27	19.64	18.67	19.99	20.36
	3H	19.65	20.79	20.06	21.18	21.58	19.94	21.08	20.35	21.48	21.88
	4H	20.29	21.32	20.73	21.74	22.17	20.53	21.56	20.96	21.97	22.41
	6H	20.74	21.63	21.19	22.07	22.53	20.93	21.83	21.38	22.27	22.72
	8H	20.85	21.68	21.31	22.13	22.59	21.03	21.87	21.49	22.31	22.78
	12H	20.91	21.66	21.39	22.13	22.60	21.09	21.84	21.57	22.32	22.79
8H	4H	20.58	21.41	21.04	21.86	22.32	20.79	21.63	21.25	22.07	22.54
	6H	21.11	21.81	21.61	22.30	22.77	21.27	21.97	21.77	22.46	22.93
	8H	21.27	21.90	21.78	22.40	22.89	21.42	22.04	21.93	22.55	23.03
	12H	21.38	21.93	21.88	22.42	22.98	21.52	22.07	22.03	22.56	23.12
12H	4H	20.59	21.34	21.07	21.82	22.29	20.81	21.56	21.29	22.03	22.50
	6H	21.14	21.77	21.65	22.27	22.76	21.30	21.93	21.81	22.43	22.92
	8H	21.35	21.90	21.86	22.39	22.95	21.49	22.04	22.00	22.53	23.09