

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: P1439679

Luminaire Tested: S122DR-S290D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439679
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-S290D830-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

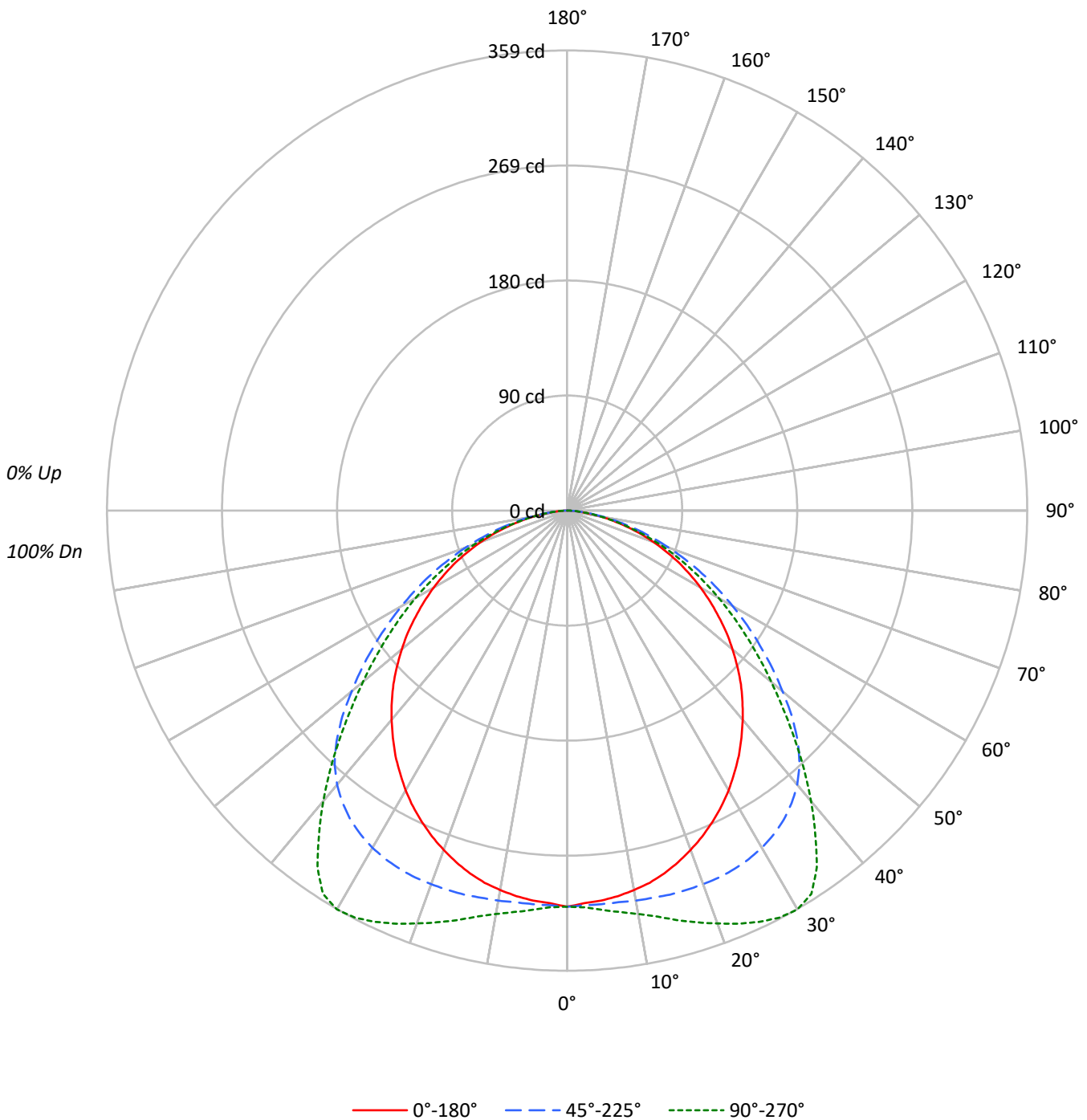
Lumens per Lamp: N/A
Luminaire Lumens: 950.5 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	5854	5854	5854
5°	5808	5861	5947
10°	5783	5945	6147
15°	5747	6084	6486
20°	5680	6254	6911
25°	5602	6451	7400
30°	5513	6646	7860
35°	5401	6814	7854
40°	5268	6908	7326
45°	5136	6816	6709
50°	4964	6467	6125
55°	4766	6068	5628
60°	4555	5650	5176
65°	4304	5205	4721
70°	3961	4653	4232
75°	3499	4033	3645
80°	2891	3197	2891
85°	1913	2087	2000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6870 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.6	3.1
10°-20°	88.3	9.3
20°-30°	143.2	15.1
30°-40°	181.2	19.1
40°-50°	181.5	19.1
50°-60°	152.0	16.0
60°-70°	107.1	11.3
70°-80°	55.3	5.8
80°-90°	12.2	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°	261.0	27.5
0°-40°	442.3	46.5
0°-60°	775.8	81.6
0°-90°	950.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	950.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	309	309	309	309	309	
5°	305	311	308	310	313	29
15°	293	301	310	323	331	83
25°	268	282	309	339	354	123
35°	234	252	295	333	340	146
45°	192	212	254	256	250	148
55°	144	162	184	176	170	129
65°	96	107	116	109	105	95
75°	48	53	55	51	50	51
85°	9	10	10	10	9	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	309.0	309.0	309.0	309.0	309.0
2.5°	306.6	311.5	308.2	308.6	309.8
5°	305.4	310.6	308.2	309.8	312.7
7.5°	303.4	309.0	308.2	311.5	315.9
10°	300.6	307.0	309.0	314.7	319.5
12.5°	297.4	304.2	309.4	318.3	324.3
15°	293.0	301.4	310.2	322.7	330.7
17.5°	287.7	297.8	310.2	327.5	336.8
20°	281.7	293.4	310.2	331.5	342.8
22.5°	275.3	288.1	309.8	335.2	348.8
25°	268.0	282.5	308.6	338.8	354.0
27.5°	260.4	276.1	306.6	341.6	358.1
30°	252.0	268.9	303.8	342.8	359.3
32.5°	242.7	261.2	299.8	340.4	354.5
35°	233.5	252.4	294.6	332.7	339.6
37.5°	223.4	243.1	287.7	317.9	317.9
40°	213.0	233.1	279.3	297.4	296.2
42.5°	202.5	222.6	268.5	277.3	273.3
45°	191.7	211.8	254.4	256.4	250.4
47.5°	180.0	199.7	237.9	235.1	228.3
50°	168.4	187.7	219.4	214.6	207.8
52.5°	156.7	175.2	201.7	194.9	188.9
55°	144.3	162.0	183.7	176.0	170.4
57.5°	132.2	148.7	166.4	157.9	153.1
60°	120.2	135.0	149.1	141.1	136.6
62.5°	108.1	121.0	132.6	124.6	120.6
65°	96.0	106.9	116.1	108.9	105.3
67.5°	83.6	93.2	99.7	93.2	90.8
70°	71.5	79.2	84.0	78.4	76.4
72.5°	59.5	65.9	69.1	64.7	62.7
75°	47.8	52.6	55.1	51.0	49.8
77.5°	36.6	40.2	41.4	38.6	37.0
80°	26.5	28.5	29.3	27.3	26.5
82.5°	16.5	18.1	18.9	17.3	16.9
85°	8.8	9.6	9.6	9.6	9.2
87.5°	3.2	4.0	4.0	4.0	3.6
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	17.62	19.24	17.99	19.55	19.87	18.14	19.75	18.50	20.06	20.38
	3H	19.20	20.65	19.57	20.98	21.34	19.61	21.06	19.98	21.39	21.75
	4H	19.73	21.10	20.13	21.45	21.82	20.10	21.46	20.50	21.81	22.19
	6H	20.08	21.34	20.49	21.70	22.10	20.40	21.66	20.81	22.03	22.42
	8H	20.16	21.36	20.58	21.75	22.15	20.47	21.68	20.90	22.07	22.47
	12H	20.19	21.35	20.62	21.73	22.16	20.51	21.66	20.94	22.04	22.47
4H	2H	18.38	19.75	18.78	20.09	20.47	18.78	20.14	19.17	20.49	20.87
	3H	20.15	21.29	20.56	21.69	22.09	20.44	21.58	20.85	21.98	22.38
	4H	20.80	21.83	21.23	22.24	22.68	21.04	22.06	21.47	22.48	22.91
	6H	21.24	22.14	21.69	22.58	23.03	21.43	22.33	21.89	22.77	23.23
	8H	21.35	22.19	21.81	22.63	23.10	21.53	22.37	21.99	22.81	23.28
	12H	21.41	22.16	21.89	22.64	23.11	21.59	22.34	22.07	22.82	23.29
8H	4H	21.08	21.92	21.54	22.36	22.83	21.29	22.13	21.76	22.57	23.04
	6H	21.62	22.31	22.11	22.80	23.28	21.78	22.47	22.27	22.96	23.44
	8H	21.78	22.40	22.29	22.91	23.39	21.92	22.55	22.43	23.05	23.54
	12H	21.88	22.43	22.39	22.92	23.48	22.02	22.57	22.53	23.06	23.63
12H	4H	21.10	21.85	21.58	22.32	22.79	21.31	22.06	21.79	22.54	23.01
	6H	21.65	22.27	22.16	22.78	23.26	21.81	22.43	22.32	22.94	23.42
	8H	21.85	22.40	22.36	22.89	23.46	21.99	22.55	22.50	23.04	23.60