

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: P1439682

Luminaire Tested: S122DR-S290D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439682
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-S290D850-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

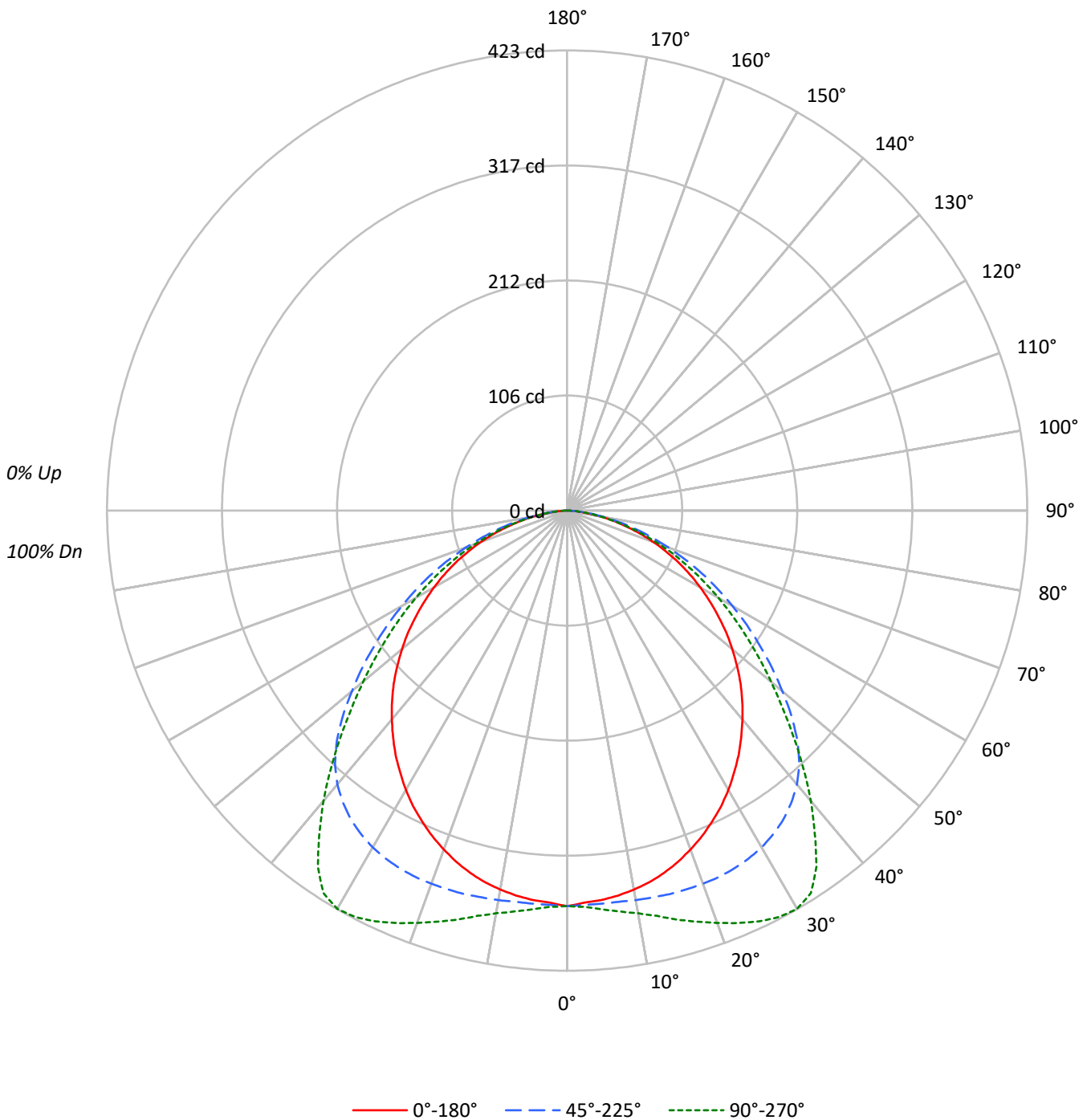
Lumens per Lamp: N/A
Luminaire Lumens: 1118.3 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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	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	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85					85			
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51					51			
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44					44			
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39					39			
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34					34			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30					30			
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27					27			
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6889	6889	6889
5°	6835	6898	6997
10°	6805	6995	7232
15°	6761	7159	7634
20°	6684	7359	8131
25°	6593	7590	8709
30°	6486	7821	9247
35°	6353	8016	9242
40°	6198	8127	8619
45°	6042	8019	7893
50°	5839	7610	7207
55°	5609	7138	6623
60°	5358	6646	6093
65°	5066	6128	5554
70°	4664	5473	4974
75°	4121	4743	4290
80°	3404	3764	3404
85°	2261	2456	2369

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8084 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.8	3.1
10°-20°	103.9	9.3
20°-30°	168.5	15.1
30°-40°	213.2	19.1
40°-50°	213.6	19.1
50°-60°	178.9	16.0
60°-70°	126.1	11.3
70°-80°	65.0	5.8
80°-90°	14.4	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°	307.2	27.5
0°-40°	520.4	46.5
0°-60°	912.8	81.6
0°-90°	1118.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1118.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	359	366	363	365	368	34
15°	345	355	365	380	389	97
25°	315	332	363	399	417	145
35°	275	297	347	392	400	172
45°	226	249	299	302	295	174
55°	170	191	216	207	200	152
65°	113	126	137	128	124	112
75°	56	62	65	60	59	60
85°	10	11	11	11	11	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	363.6	363.6	363.6	363.6	363.6
2.5°	360.8	366.5	362.7	363.1	364.6
5°	359.4	365.5	362.7	364.6	367.9
7.5°	357.0	363.6	362.7	366.5	371.7
10°	353.7	361.3	363.6	370.2	375.9
12.5°	349.9	357.9	364.1	374.5	381.6
15°	344.7	354.6	365.0	379.7	389.2
17.5°	338.6	350.4	365.0	385.4	396.2
20°	331.5	345.2	365.0	390.1	403.3
22.5°	323.9	339.0	364.6	394.4	410.4
25°	315.4	332.4	363.1	398.6	416.6
27.5°	306.4	324.8	360.8	401.9	421.3
30°	296.5	316.3	357.5	403.3	422.7
32.5°	285.6	307.3	352.7	400.5	417.0
35°	274.7	296.9	346.6	391.5	399.6
37.5°	262.9	286.1	338.6	374.0	374.0
40°	250.6	274.2	328.6	349.9	348.5
42.5°	238.3	262.0	315.9	326.3	321.5
45°	225.5	249.2	299.3	301.7	294.6
47.5°	211.8	235.0	279.9	276.6	268.6
50°	198.1	220.8	258.2	252.5	244.5
52.5°	184.4	206.2	237.4	229.3	222.2
55°	169.8	190.6	216.1	207.1	200.5
57.5°	155.6	175.0	195.8	185.8	180.2
60°	141.4	158.9	175.4	166.0	160.8
62.5°	127.2	142.3	156.0	146.6	141.9
65°	113.0	125.8	136.7	128.1	123.9
67.5°	98.4	109.7	117.3	109.7	106.9
70°	84.2	93.2	98.8	92.2	89.8
72.5°	70.0	77.5	81.3	76.1	73.8
75°	56.3	61.9	64.8	60.1	58.6
77.5°	43.0	47.3	48.7	45.4	43.5
80°	31.2	33.6	34.5	32.2	31.2
82.5°	19.4	21.3	22.2	20.3	19.9
85°	10.4	11.3	11.3	11.3	10.9
87.5°	3.8	4.7	4.7	4.7	4.3
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	18.19	19.80	18.56	20.12	20.43	18.70	20.32	19.07	20.63	20.94
	3H	19.76	21.22	20.14	21.54	21.90	20.17	21.62	20.55	21.95	22.31
	4H	20.30	21.67	20.70	22.01	22.39	20.66	22.03	21.06	22.38	22.75
	6H	20.64	21.91	21.05	22.27	22.66	20.96	22.23	21.38	22.59	22.98
	8H	20.72	21.93	21.15	22.32	22.72	21.04	22.24	21.46	22.63	23.03
	12H	20.76	21.92	21.19	22.30	22.73	21.07	22.23	21.50	22.61	23.04
4H	2H	18.95	20.31	19.34	20.66	21.04	19.34	20.71	19.74	21.06	21.43
	3H	20.72	21.86	21.13	22.25	22.66	21.01	22.15	21.42	22.55	22.95
	4H	21.36	22.39	21.80	22.81	23.24	21.60	22.63	22.03	23.04	23.48
	6H	21.81	22.70	22.26	23.14	23.60	22.00	22.90	22.45	23.34	23.79
	8H	21.92	22.75	22.38	23.20	23.66	22.10	22.94	22.56	23.38	23.85
	12H	21.98	22.73	22.46	23.20	23.67	22.16	22.91	22.64	23.39	23.86
8H	4H	21.65	22.48	22.11	22.93	23.39	21.86	22.70	22.32	23.14	23.61
	6H	22.18	22.88	22.68	23.37	23.84	22.34	23.04	22.84	23.53	24.00
	8H	22.34	22.97	22.86	23.47	23.96	22.49	23.11	23.00	23.62	24.11
	12H	22.45	23.00	22.96	23.49	24.05	22.59	23.14	23.10	23.63	24.19
12H	4H	21.66	22.41	22.14	22.89	23.36	21.88	22.63	22.36	23.10	23.57
	6H	22.21	22.84	22.72	23.34	23.83	22.37	23.00	22.88	23.50	23.99
	8H	22.42	22.97	22.93	23.46	24.02	22.56	23.11	23.07	23.60	24.16