

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: P1439686

Luminaire Tested: S122DR-S290D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439686
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-S290D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

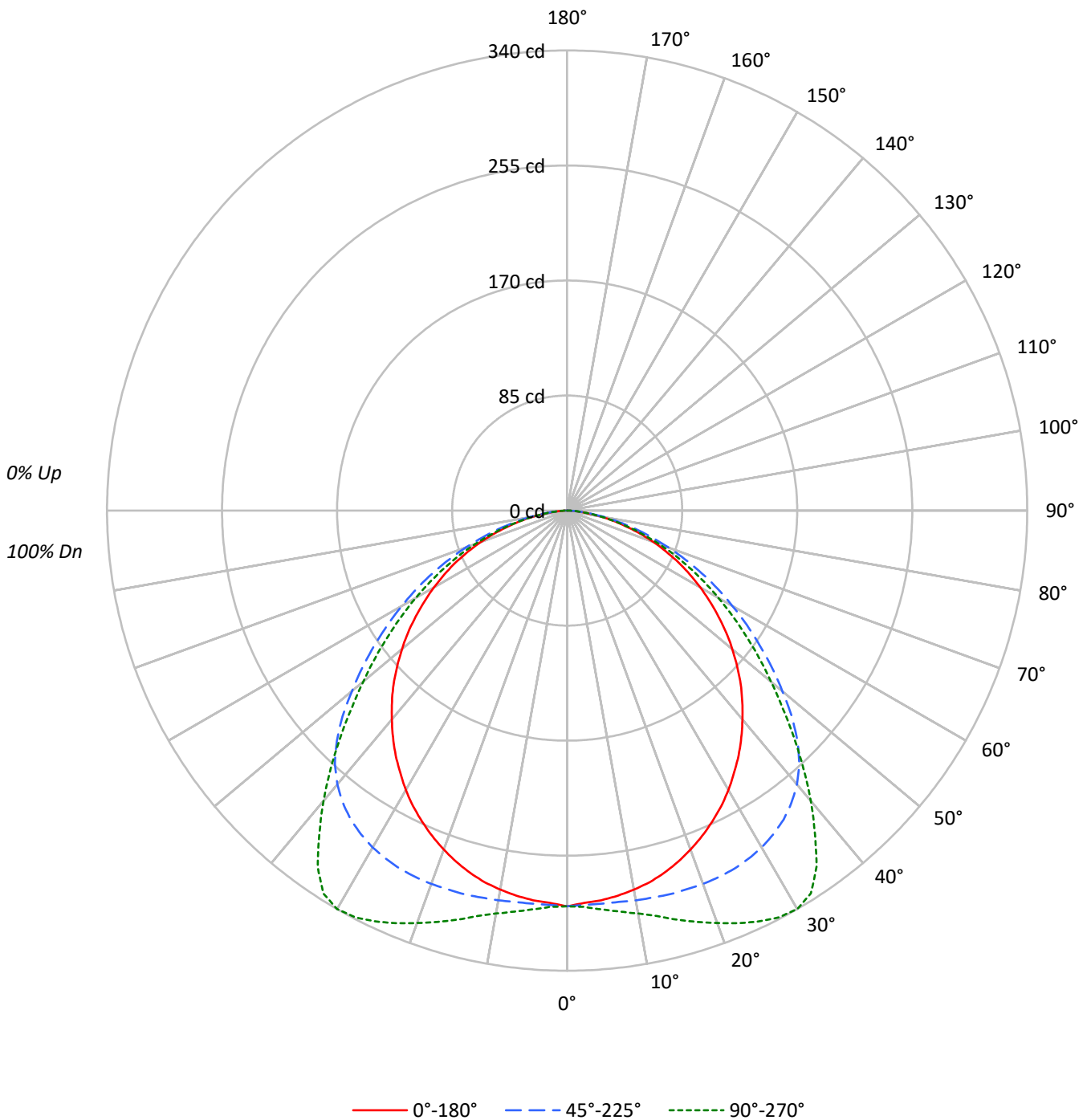
Lumens per Lamp: N/A
Luminaire Lumens: 899.2 lumens
Efficiency: N/A
Efficacy: 71.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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°	5540	5540	5540
5°	5496	5546	5626
10°	5471	5625	5816
15°	5437	5757	6137
20°	5373	5917	6538
25°	5301	6104	7003
30°	5215	6287	7436
35°	5109	6446	7431
40°	4984	6534	6930
45°	4860	6449	6347
50°	4695	6119	5795
55°	4509	5741	5325
60°	4308	5347	4899
65°	4075	4927	4465
70°	3750	4404	3999
75°	3309	3814	3448
80°	2739	3033	2739
85°	1826	1978	1891

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6500 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.0	3.1
10°-20°	83.5	9.3
20°-30°	135.5	15.1
30°-40°	171.5	19.1
40°-50°	171.7	19.1
50°-60°	143.8	16.0
60°-70°	101.4	11.3
70°-80°	52.3	5.8
80°-90°	11.6	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°	247.0	27.5
0°-40°	418.4	46.5
0°-60°	734.0	81.6
0°-90°	899.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	899.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	292	292	292	292	292	
5°	289	294	292	293	296	27
15°	277	285	294	305	313	78
25°	254	267	292	320	335	117
35°	221	239	279	315	321	138
45°	181	200	241	243	237	140
55°	136	153	174	166	161	122
65°	91	101	110	103	100	90
75°	45	50	52	48	47	48
85°	8	9	9	9	9	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	292.4	292.4	292.4	292.4	292.4
2.5°	290.1	294.7	291.6	292.0	293.1
5°	289.0	293.9	291.6	293.1	295.8
7.5°	287.0	292.4	291.6	294.7	298.8
10°	284.4	290.5	292.4	297.7	302.3
12.5°	281.3	287.8	292.8	301.1	306.8
15°	277.2	285.1	293.5	305.3	312.9
17.5°	272.2	281.7	293.5	309.9	318.6
20°	266.5	277.5	293.5	313.7	324.3
22.5°	260.4	272.6	293.1	317.1	330.0
25°	253.6	267.3	292.0	320.5	335.0
27.5°	246.4	261.2	290.1	323.2	338.8
30°	238.4	254.4	287.4	324.3	339.9
32.5°	229.6	247.1	283.6	322.0	335.3
35°	220.9	238.8	278.7	314.8	321.3
37.5°	211.4	230.0	272.2	300.7	300.7
40°	201.5	220.5	264.2	281.3	280.2
42.5°	191.6	210.6	254.0	262.3	258.5
45°	181.4	200.4	240.7	242.6	236.9
47.5°	170.3	189.0	225.1	222.4	216.0
50°	159.3	177.6	207.6	203.0	196.6
52.5°	148.3	165.8	190.9	184.4	178.7
55°	136.5	153.2	173.8	166.5	161.2
57.5°	125.1	140.7	157.4	149.4	144.9
60°	113.7	127.7	141.1	133.4	129.3
62.5°	102.3	114.4	125.5	117.9	114.1
65°	90.9	101.1	109.9	103.0	99.6
67.5°	79.1	88.2	94.3	88.2	85.9
70°	67.7	74.9	79.5	74.1	72.2
72.5°	56.3	62.4	65.4	61.2	59.3
75°	45.2	49.8	52.1	48.3	47.1
77.5°	34.6	38.0	39.2	36.5	35.0
80°	25.1	27.0	27.8	25.9	25.1
82.5°	15.6	17.1	17.9	16.3	16.0
85°	8.4	9.1	9.1	9.1	8.7
87.5°	3.0	3.8	3.8	3.8	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	17.43	19.05	17.80	19.36	19.67	17.94	19.56	18.31	19.87	20.19
	3H	19.00	20.46	19.38	20.78	21.14	19.41	20.87	19.79	21.19	21.55
	4H	19.54	20.91	19.94	21.25	21.63	19.90	21.27	20.30	21.62	22.00
	6H	19.88	21.15	20.29	21.51	21.90	20.21	21.47	20.62	21.84	22.23
	8H	19.97	21.17	20.39	21.56	21.96	20.28	21.49	20.70	21.87	22.27
	12H	20.00	21.16	20.43	21.54	21.97	20.31	21.47	20.74	21.85	22.28
4H	2H	18.19	19.55	18.59	19.90	20.28	18.58	19.95	18.98	20.30	20.67
	3H	19.96	21.10	20.37	21.50	21.90	20.25	21.39	20.66	21.79	22.19
	4H	20.61	21.63	21.04	22.05	22.48	20.84	21.87	21.28	22.29	22.72
	6H	21.05	21.94	21.50	22.39	22.84	21.24	22.14	21.70	22.58	23.04
	8H	21.16	22.00	21.62	22.44	22.90	21.34	22.18	21.80	22.62	23.09
	12H	21.22	21.97	21.70	22.45	22.92	21.40	22.15	21.88	22.63	23.10
8H	4H	20.89	21.73	21.35	22.17	22.63	21.10	21.94	21.56	22.38	22.85
	6H	21.43	22.12	21.92	22.61	23.09	21.59	22.28	22.08	22.77	23.25
	8H	21.59	22.21	22.10	22.72	23.20	21.73	22.35	22.24	22.86	23.35
	12H	21.69	22.24	22.20	22.73	23.29	21.83	22.38	22.34	22.87	23.43
12H	4H	20.90	21.66	21.38	22.13	22.60	21.12	21.87	21.60	22.35	22.81
	6H	21.46	22.08	21.97	22.59	23.07	21.61	22.24	22.12	22.75	23.23
	8H	21.66	22.21	22.17	22.70	23.26	21.80	22.35	22.31	22.84	23.41