

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: P1439683

Luminaire Tested: S122DR-S290D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439683
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-S290D927-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

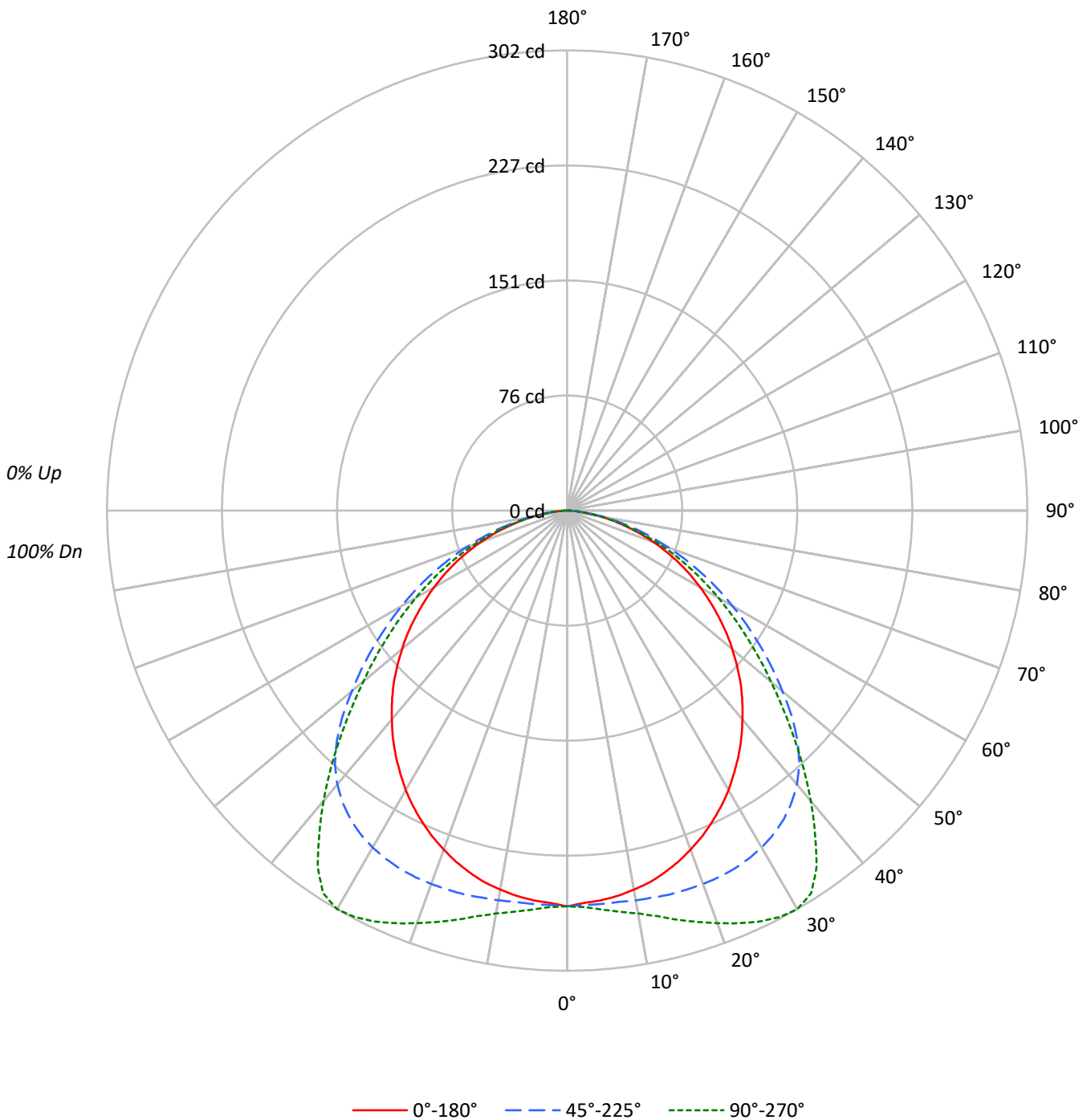
Lumens per Lamp: N/A
Luminaire Lumens: 798.9 lumens
Efficiency: N/A
Efficacy: 63.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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°	4920	4920	4920
5°	4882	4928	4998
10°	4860	4996	5165
15°	4829	5115	5453
20°	4774	5258	5809
25°	4710	5423	6221
30°	4634	5585	6607
35°	4538	5727	6601
40°	4427	5805	6156
45°	4316	5728	5637
50°	4171	5435	5146
55°	4007	5100	4730
60°	3827	4748	4350
65°	3618	4375	3967
70°	3329	3911	3556
75°	2943	3389	3067
80°	2433	2695	2433
85°	1609	1761	1696

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5774 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.8	3.1
10°-20°	74.2	9.3
20°-30°	120.4	15.1
30°-40°	152.3	19.1
40°-50°	152.5	19.1
50°-60°	127.8	16.0
60°-70°	90.1	11.3
70°-80°	46.5	5.8
80°-90°	10.3	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°	219.4	27.5
0°-40°	371.7	46.5
0°-60°	652.0	81.6
0°-90°	798.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	798.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	260	260	260	260	260	
5°	257	261	259	260	263	24
15°	246	253	261	271	278	69
25°	225	237	259	285	298	104
35°	196	212	248	280	285	123
45°	161	178	214	216	210	124
55°	121	136	154	148	143	109
65°	81	90	98	92	88	80
75°	40	44	46	43	42	43
85°	7	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°	259.7	259.7	259.7	259.7	259.7
2.5°	257.7	261.8	259.1	259.4	260.4
5°	256.7	261.1	259.1	260.4	262.8
7.5°	255.0	259.7	259.1	261.8	265.5
10°	252.6	258.1	259.7	264.5	268.5
12.5°	249.9	255.7	260.1	267.5	272.6
15°	246.2	253.3	260.8	271.2	278.0
17.5°	241.8	250.3	260.8	275.3	283.0
20°	236.8	246.6	260.8	278.7	288.1
22.5°	231.4	242.2	260.4	281.7	293.2
25°	225.3	237.4	259.4	284.7	297.6
27.5°	218.9	232.0	257.7	287.1	300.9
30°	211.8	226.0	255.3	288.1	302.0
32.5°	204.0	219.5	252.0	286.1	297.9
35°	196.2	212.1	247.6	279.7	285.4
37.5°	187.8	204.3	241.8	267.2	267.2
40°	179.0	195.9	234.7	249.9	248.9
42.5°	170.2	187.1	225.6	233.1	229.7
45°	161.1	178.0	213.8	215.5	210.4
47.5°	151.3	167.9	200.0	197.6	191.8
50°	141.5	157.7	184.4	180.4	174.6
52.5°	131.7	147.3	169.6	163.8	158.7
55°	121.3	136.1	154.4	147.9	143.2
57.5°	111.1	125.0	139.8	132.7	128.7
60°	101.0	113.5	125.3	118.6	114.8
62.5°	90.9	101.7	111.5	104.7	101.3
65°	80.7	89.8	97.6	91.5	88.5
67.5°	70.3	78.4	83.8	78.4	76.3
70°	60.1	66.5	70.6	65.9	64.2
72.5°	50.0	55.4	58.1	54.4	52.7
75°	40.2	44.2	46.3	42.9	41.9
77.5°	30.7	33.8	34.8	32.4	31.1
80°	22.3	24.0	24.7	23.0	22.3
82.5°	13.8	15.2	15.9	14.5	14.2
85°	7.4	8.1	8.1	8.1	7.8
87.5°	2.7	3.4	3.4	3.4	3.0
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	17.02	18.63	17.39	18.95	19.26	17.53	19.15	17.90	19.46	19.77
	3H	18.59	20.05	18.97	20.37	20.73	19.00	20.45	19.38	20.78	21.14
	4H	19.13	20.50	19.53	20.84	21.22	19.49	20.86	19.89	21.21	21.59
	6H	19.47	20.74	19.88	21.10	21.49	19.80	21.06	20.21	21.43	21.82
	8H	19.55	20.76	19.98	21.15	21.55	19.87	21.08	20.29	21.46	21.86
	12H	19.59	20.75	20.02	21.13	21.56	19.90	21.06	20.33	21.44	21.87
4H	2H	17.78	19.14	18.17	19.49	19.87	18.17	19.54	18.57	19.89	20.26
	3H	19.55	20.69	19.96	21.08	21.49	19.84	20.98	20.25	21.38	21.78
	4H	20.19	21.22	20.63	21.64	22.07	20.43	21.46	20.87	21.88	22.31
	6H	20.64	21.53	21.09	21.97	22.43	20.83	21.73	21.29	22.17	22.62
	8H	20.75	21.58	21.21	22.03	22.49	20.93	21.77	21.39	22.21	22.68
	12H	20.81	21.56	21.29	22.03	22.50	20.99	21.74	21.47	22.22	22.69
8H	4H	20.48	21.31	20.94	21.76	22.22	20.69	21.53	21.15	21.97	22.44
	6H	21.02	21.71	21.51	22.20	22.67	21.18	21.87	21.67	22.36	22.83
	8H	21.17	21.80	21.69	22.30	22.79	21.32	21.94	21.83	22.45	22.94
	12H	21.28	21.83	21.79	22.32	22.88	21.42	21.97	21.93	22.46	23.02
12H	4H	20.49	21.24	20.97	21.72	22.19	20.71	21.46	21.19	21.93	22.40
	6H	21.04	21.67	21.56	22.18	22.66	21.20	21.83	21.71	22.33	22.82
	8H	21.25	21.80	21.76	22.29	22.85	21.39	21.94	21.90	22.43	23.00