

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: P1439638

Luminaire Tested: S122DR-H290D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439638
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-H290D927-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

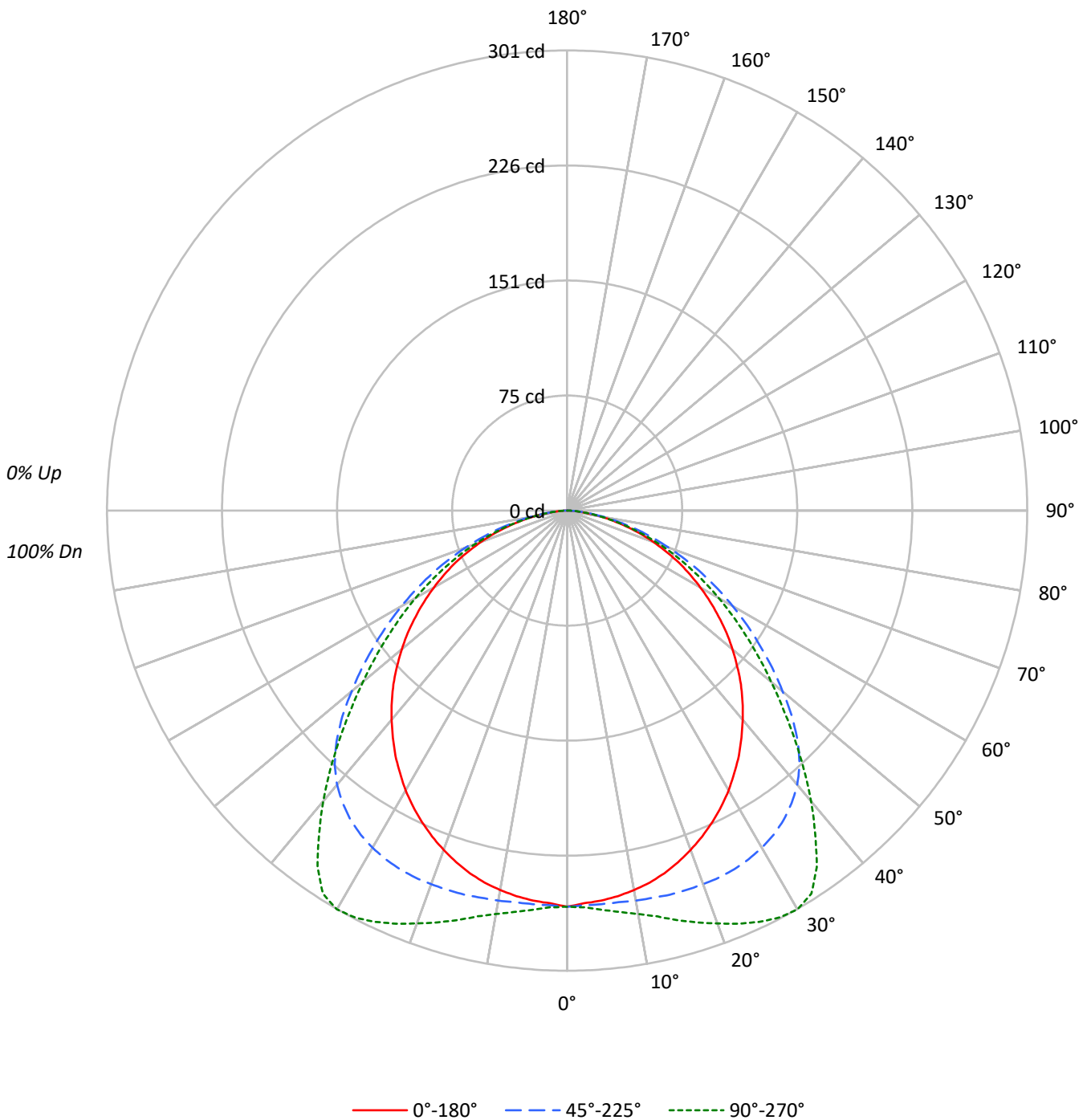
Lumens per Lamp: N/A
Luminaire Lumens: 796.9 lumens
Efficiency: N/A
Efficacy: 68.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	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°	4909	4909	4909
5°	4871	4914	4985
10°	4848	4985	5154
15°	4817	5102	5439
20°	4762	5244	5794
25°	4697	5410	6204
30°	4623	5572	6589
35°	4529	5713	6585
40°	4417	5792	6141
45°	4306	5715	5624
50°	4162	5423	5134
55°	3997	5087	4720
60°	3816	4736	4342
65°	3609	4366	3958
70°	3324	3900	3545
75°	2935	3382	3060
80°	2422	2684	2422
85°	1609	1761	1674

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5761 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.8	3.1
10°-20°	74.0	9.3
20°-30°	120.1	15.1
30°-40°	151.9	19.1
40°-50°	152.2	19.1
50°-60°	127.5	16.0
60°-70°	89.8	11.3
70°-80°	46.3	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°	218.9	27.5
0°-40°	370.8	46.5
0°-60°	650.5	81.6
0°-90°	796.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	796.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	259	259	259	259	259	
5°	256	260	258	260	262	24
15°	246	253	260	271	277	69
25°	225	237	259	284	297	104
35°	196	212	247	279	285	122
45°	161	178	213	215	210	124
55°	121	136	154	148	143	108
65°	80	90	97	91	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°	259.1	259.1	259.1	259.1	259.1
2.5°	257.1	261.1	258.4	258.8	259.8
5°	256.1	260.5	258.4	259.8	262.1
7.5°	254.4	259.1	258.4	261.1	264.8
10°	252.0	257.4	259.1	263.8	267.9
12.5°	249.3	255.1	259.4	266.9	271.9
15°	245.6	252.7	260.1	270.6	277.3
17.5°	241.2	249.7	260.1	274.6	282.4
20°	236.2	246.0	260.1	278.0	287.4
22.5°	230.8	241.6	259.8	281.0	292.5
25°	224.7	236.9	258.8	284.0	296.8
27.5°	218.3	231.5	257.1	286.4	300.2
30°	211.3	225.4	254.7	287.4	301.2
32.5°	203.5	219.0	251.4	285.4	297.2
35°	195.8	211.6	247.0	279.0	284.7
37.5°	187.3	203.8	241.2	266.5	266.5
40°	178.6	195.4	234.2	249.3	248.3
42.5°	169.8	186.7	225.1	232.5	229.1
45°	160.7	177.6	213.3	215.0	209.9
47.5°	150.9	167.5	199.5	197.1	191.4
50°	141.2	157.3	184.0	179.9	174.2
52.5°	131.4	146.9	169.1	163.4	158.4
55°	121.0	135.8	154.0	147.6	142.9
57.5°	110.9	124.7	139.5	132.4	128.4
60°	100.7	113.2	125.0	118.3	114.6
62.5°	90.6	101.4	111.2	104.4	101.1
65°	80.5	89.6	97.4	91.3	88.3
67.5°	70.1	78.2	83.6	78.2	76.1
70°	60.0	66.4	70.4	65.7	64.0
72.5°	49.9	55.3	58.0	54.2	52.6
75°	40.1	44.1	46.2	42.8	41.8
77.5°	30.7	33.7	34.7	32.3	31.0
80°	22.2	23.9	24.6	22.9	22.2
82.5°	13.8	15.2	15.8	14.5	14.2
85°	7.4	8.1	8.1	8.1	7.7
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	17.01	18.63	17.38	18.94	19.26	17.53	19.14	17.89	19.45	19.77
	3H	18.59	20.04	18.96	20.37	20.73	18.99	20.45	19.37	20.77	21.13
	4H	19.12	20.49	19.52	20.84	21.21	19.49	20.85	19.88	21.20	21.58
	6H	19.46	20.73	19.88	21.09	21.49	19.79	21.05	20.20	21.42	21.81
	8H	19.55	20.75	19.97	21.14	21.54	19.86	21.07	20.28	21.46	21.85
	12H	19.58	20.74	20.01	21.12	21.55	19.89	21.05	20.32	21.43	21.86
4H	2H	17.77	19.14	18.17	19.48	19.86	18.16	19.53	18.56	19.88	20.26
	3H	19.54	20.68	19.95	21.08	21.48	19.83	20.97	20.24	21.37	21.77
	4H	20.19	21.21	20.62	21.63	22.07	20.43	21.45	20.86	21.87	22.30
	6H	20.63	21.53	21.08	21.97	22.42	20.82	21.72	21.28	22.16	22.61
	8H	20.74	21.58	21.20	22.02	22.49	20.92	21.76	21.38	22.20	22.67
	12H	20.80	21.55	21.28	22.03	22.50	20.98	21.73	21.46	22.21	22.68
8H	4H	20.47	21.31	20.93	21.75	22.21	20.68	21.52	21.14	21.96	22.43
	6H	21.01	21.70	21.50	22.19	22.67	21.17	21.86	21.66	22.35	22.83
	8H	21.17	21.79	21.68	22.30	22.78	21.31	21.93	21.82	22.44	22.93
	12H	21.27	21.82	21.78	22.31	22.87	21.41	21.96	21.92	22.45	23.01
12H	4H	20.48	21.24	20.97	21.71	22.18	20.70	21.45	21.18	21.93	22.40
	6H	21.04	21.66	21.55	22.17	22.65	21.19	21.82	21.70	22.32	22.81
	8H	21.24	21.79	21.75	22.28	22.85	21.38	21.93	21.89	22.42	22.99