

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: P1439639

Luminaire Tested: S122DR-H290D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439639
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-H290D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

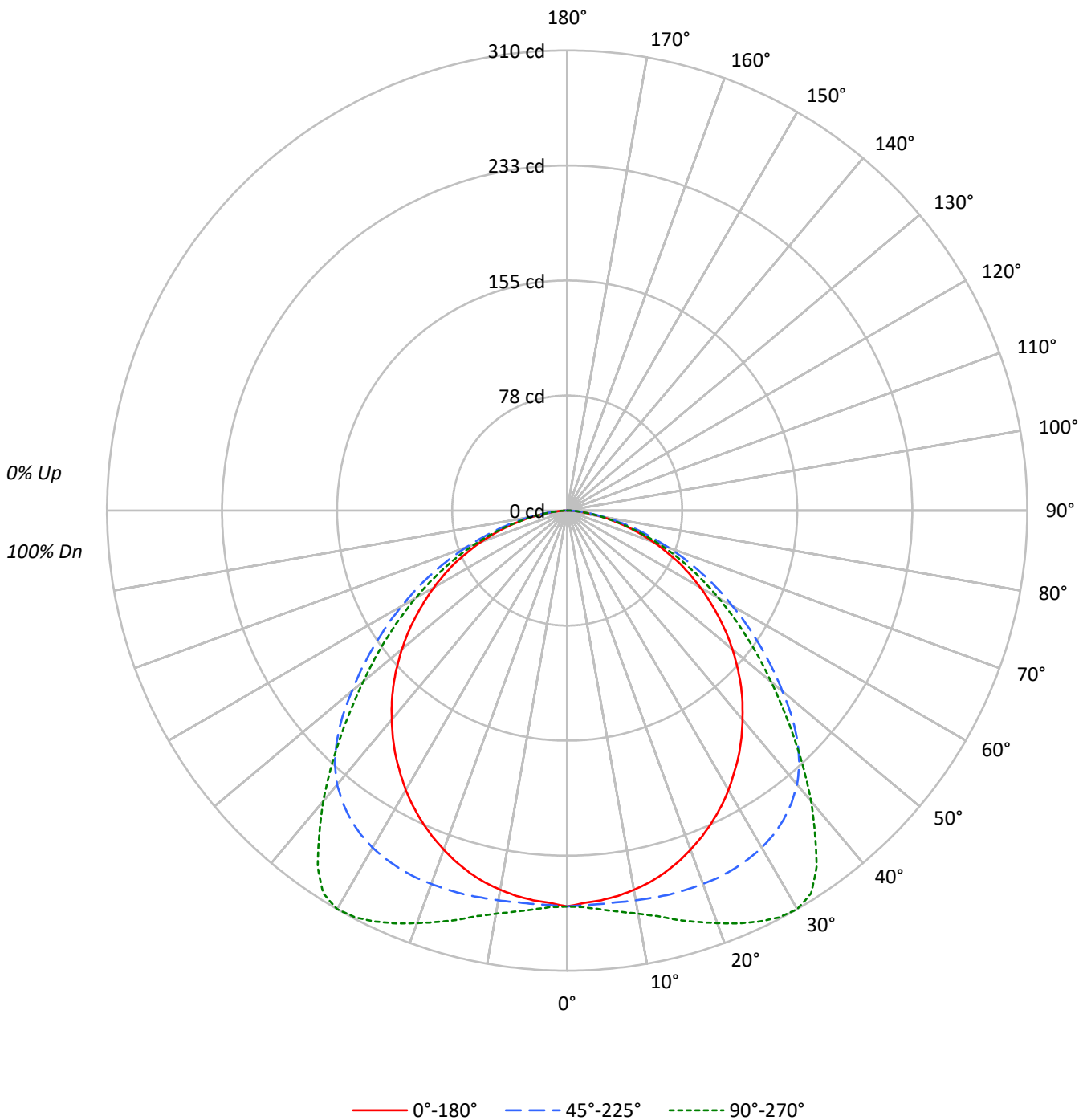
Lumens per Lamp: N/A
Luminaire Lumens: 820.1 lumens
Efficiency: N/A
Efficacy: 70.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	5053	5053	5053
5°	5011	5059	5131
10°	4990	5131	5304
15°	4958	5251	5598
20°	4901	5397	5964
25°	4835	5567	6386
30°	4756	5736	6782
35°	4660	5879	6777
40°	4546	5960	6322
45°	4432	5881	5787
50°	4283	5580	5285
55°	4112	5235	4856
60°	3929	4877	4467
65°	3716	4492	4075
70°	3418	4016	3650
75°	3023	3477	3148
80°	2499	2760	2499
85°	1652	1804	1739

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5927 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.5	3.1
10°-20°	76.2	9.3
20°-30°	123.6	15.1
30°-40°	156.4	19.1
40°-50°	156.6	19.1
50°-60°	131.2	16.0
60°-70°	92.4	11.3
70°-80°	47.7	5.8
80°-90°	10.6	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°	225.3	27.5
0°-40°	381.7	46.5
0°-60°	669.4	81.6
0°-90°	820.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	820.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	267	267	267	267	267	
5°	264	268	266	267	270	25
15°	253	260	268	278	285	71
25°	231	244	266	292	306	107
35°	202	218	254	287	293	126
45°	165	183	220	221	216	127
55°	124	140	158	152	147	111
65°	83	92	100	94	91	82
75°	41	45	48	44	43	44
85°	8	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°	266.7	266.7	266.7	266.7	266.7
2.5°	264.6	268.7	266.0	266.3	267.4
5°	263.5	268.1	266.0	267.4	269.8
7.5°	261.8	266.7	266.0	268.7	272.6
10°	259.4	264.9	266.7	271.5	275.7
12.5°	256.6	262.5	267.0	274.6	279.8
15°	252.8	260.1	267.7	278.5	285.4
17.5°	248.3	257.0	267.7	282.6	290.6
20°	243.1	253.1	267.7	286.1	295.8
22.5°	237.5	248.6	267.4	289.2	301.0
25°	231.3	243.8	266.3	292.3	305.5
27.5°	224.7	238.2	264.6	294.8	309.0
30°	217.4	232.0	262.2	295.8	310.0
32.5°	209.4	225.4	258.7	293.7	305.8
35°	201.5	217.8	254.2	287.1	293.0
37.5°	192.8	209.8	248.3	274.3	274.3
40°	183.8	201.1	241.0	256.6	255.6
42.5°	174.8	192.1	231.6	239.3	235.8
45°	165.4	182.7	219.5	221.2	216.0
47.5°	155.4	172.3	205.3	202.9	197.0
50°	145.3	161.9	189.3	185.2	179.3
52.5°	135.2	151.2	174.1	168.2	163.0
55°	124.5	139.7	158.5	151.9	147.0
57.5°	114.1	128.3	143.6	136.3	132.1
60°	103.7	116.5	128.7	121.7	117.9
62.5°	93.3	104.4	114.4	107.5	104.0
65°	82.9	92.2	100.2	94.0	90.9
67.5°	72.1	80.4	86.0	80.4	78.4
70°	61.7	68.3	72.5	67.6	65.9
72.5°	51.3	56.9	59.6	55.8	54.1
75°	41.3	45.4	47.5	44.0	43.0
77.5°	31.6	34.7	35.7	33.3	31.9
80°	22.9	24.6	25.3	23.6	22.9
82.5°	14.2	15.6	16.3	14.9	14.6
85°	7.6	8.3	8.3	8.3	8.0
87.5°	2.8	3.5	3.5	3.5	3.1
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	17.11	18.73	17.48	19.04	19.35	17.63	19.24	17.99	19.55	19.87
	3H	18.68	20.14	19.06	20.46	20.82	19.09	20.55	19.47	20.87	21.23
	4H	19.22	20.59	19.62	20.93	21.31	19.59	20.95	19.98	21.30	21.68
	6H	19.56	20.83	19.97	21.19	21.58	19.89	21.15	20.30	21.52	21.91
	8H	19.65	20.85	20.07	21.24	21.64	19.96	21.17	20.39	21.56	21.96
	12H	19.68	20.84	20.11	21.22	21.65	20.00	21.15	20.42	21.53	21.96
4H	2H	17.87	19.23	18.27	19.58	19.96	18.26	19.63	18.66	19.98	20.36
	3H	19.64	20.78	20.05	21.17	21.57	19.93	21.07	20.34	21.47	21.87
	4H	20.28	21.31	20.72	21.73	22.16	20.52	21.55	20.96	21.97	22.40
	6H	20.73	21.62	21.18	22.07	22.52	20.92	21.82	21.38	22.26	22.72
	8H	20.84	21.68	21.30	22.12	22.58	21.02	21.86	21.48	22.30	22.77
	12H	20.90	21.65	21.38	22.13	22.60	21.08	21.83	21.56	22.31	22.78
8H	4H	20.57	21.40	21.03	21.85	22.31	20.78	21.62	21.24	22.06	22.53
	6H	21.11	21.80	21.60	22.29	22.76	21.27	21.96	21.76	22.45	22.93
	8H	21.27	21.89	21.78	22.40	22.88	21.41	22.03	21.92	22.54	23.03
	12H	21.37	21.92	21.88	22.41	22.97	21.51	22.06	22.02	22.55	23.11
12H	4H	20.58	21.33	21.06	21.81	22.28	20.80	21.55	21.28	22.03	22.49
	6H	21.13	21.76	21.65	22.27	22.75	21.29	21.92	21.80	22.42	22.91
	8H	21.34	21.89	21.85	22.38	22.94	21.48	22.03	21.99	22.52	23.09