

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: P1439640

Luminaire Tested: S122DR-H290D935-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439640
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-H290D935-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

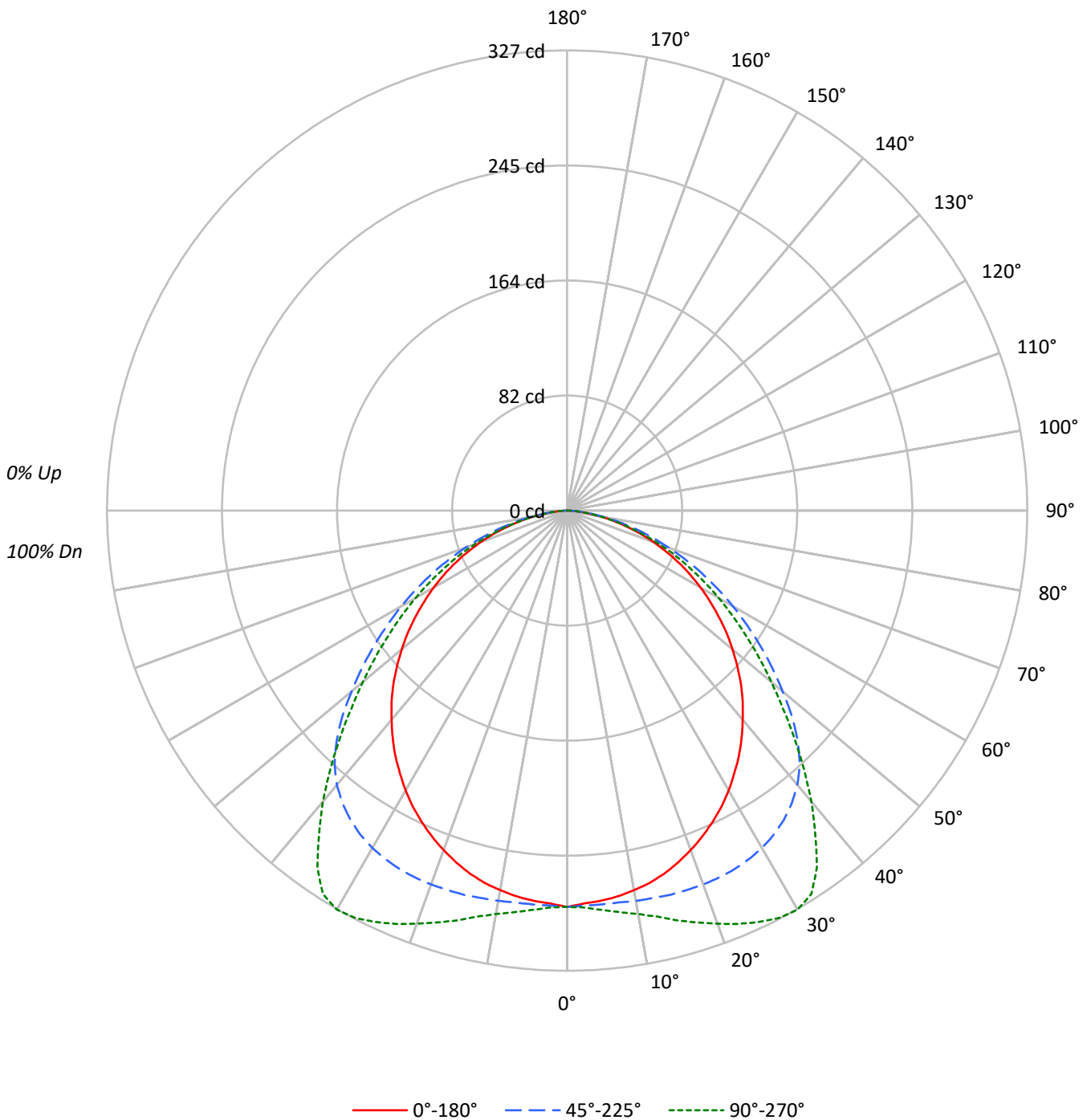
Lumens per Lamp: N/A
Luminaire Lumens: 866.1 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	5335	5335	5335
5°	5293	5342	5418
10°	5269	5417	5600
15°	5237	5545	5912
20°	5176	5700	6299
25°	5107	5878	6744
30°	5023	6058	7162
35°	4922	6208	7156
40°	4800	6294	6675
45°	4681	6211	6112
50°	4521	5892	5580
55°	4344	5529	5130
60°	4149	5149	4718
65°	3923	4743	4299
70°	3612	4238	3855
75°	3192	3675	3323
80°	2640	2913	2640
85°	1761	1913	1826

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6259 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.9	3.1
10°-20°	80.4	9.3
20°-30°	130.5	15.1
30°-40°	165.2	19.1
40°-50°	165.4	19.1
50°-60°	138.5	16.0
60°-70°	97.6	11.3
70°-80°	50.4	5.8
80°-90°	11.2	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°	237.9	27.5
0°-40°	403.0	46.5
0°-60°	707.0	81.6
0°-90°	866.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	866.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	282	282	282	282	282	
5°	278	283	281	282	285	26
15°	267	275	283	294	301	75
25°	244	257	281	309	323	113
35°	213	230	268	303	309	133
45°	175	193	232	234	228	135
55°	132	148	167	160	155	118
65°	88	97	106	99	96	86
75°	44	48	50	46	45	46
85°	8	9	9	9	8	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	281.6	281.6	281.6	281.6	281.6
2.5°	279.4	283.8	280.9	281.2	282.3
5°	278.3	283.1	280.9	282.3	284.9
7.5°	276.5	281.6	280.9	283.8	287.8
10°	273.9	279.8	281.6	286.7	291.1
12.5°	271.0	277.2	282.0	290.0	295.5
15°	267.0	274.7	282.7	294.1	301.4
17.5°	262.2	271.4	282.7	298.5	306.9
20°	256.7	267.3	282.7	302.1	312.4
22.5°	250.8	262.6	282.3	305.4	317.9
25°	244.3	257.4	281.2	308.7	322.6
27.5°	237.3	251.6	279.4	311.3	326.3
30°	229.6	245.0	276.9	312.4	327.4
32.5°	221.2	238.0	273.2	310.2	323.0
35°	212.8	230.0	268.4	303.2	309.4
37.5°	203.6	221.6	262.2	289.7	289.7
40°	194.1	212.4	254.5	271.0	269.9
42.5°	184.6	202.9	244.6	252.7	249.0
45°	174.7	193.0	231.8	233.6	228.1
47.5°	164.1	182.0	216.8	214.2	208.0
50°	153.4	171.0	199.9	195.6	189.3
52.5°	142.8	159.7	183.8	177.6	172.1
55°	131.5	147.6	167.4	160.4	155.3
57.5°	120.5	135.5	151.6	143.9	139.5
60°	109.5	123.0	135.9	128.5	124.5
62.5°	98.5	110.2	120.8	113.5	109.9
65°	87.5	97.4	105.8	99.2	95.9
67.5°	76.2	85.0	90.8	85.0	82.8
70°	65.2	72.1	76.5	71.4	69.6
72.5°	54.2	60.1	63.0	59.0	57.1
75°	43.6	48.0	50.2	46.5	45.4
77.5°	33.3	36.6	37.7	35.2	33.7
80°	24.2	26.0	26.7	24.9	24.2
82.5°	15.0	16.5	17.2	15.7	15.4
85°	8.1	8.8	8.8	8.8	8.4
87.5°	2.9	3.7	3.7	3.7	3.3
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	17.30	18.91	17.67	19.23	19.54	17.81	19.43	18.18	19.74	20.06
	3H	18.87	20.33	19.25	20.65	21.01	19.28	20.74	19.66	21.06	21.42
	4H	19.41	20.78	19.81	21.12	21.50	19.78	21.14	20.17	21.49	21.87
	6H	19.75	21.02	20.16	21.38	21.77	20.08	21.34	20.49	21.71	22.10
	8H	19.84	21.04	20.26	21.43	21.83	20.15	21.36	20.57	21.75	22.14
	12H	19.87	21.03	20.30	21.41	21.84	20.18	21.34	20.61	21.72	22.15
4H	2H	18.06	19.42	18.45	19.77	20.15	18.45	19.82	18.85	20.17	20.54
	3H	19.83	20.97	20.24	21.37	21.77	20.12	21.26	20.53	21.66	22.06
	4H	20.48	21.50	20.91	21.92	22.35	20.71	21.74	21.15	22.16	22.59
	6H	20.92	21.81	21.37	22.26	22.71	21.11	22.01	21.57	22.45	22.91
	8H	21.03	21.87	21.49	22.31	22.77	21.21	22.05	21.67	22.49	22.96
	12H	21.09	21.84	21.57	22.32	22.79	21.27	22.02	21.75	22.50	22.97
8H	4H	20.76	21.60	21.22	22.04	22.50	20.97	21.81	21.43	22.25	22.72
	6H	21.30	21.99	21.79	22.48	22.95	21.46	22.15	21.95	22.64	23.12
	8H	21.46	22.08	21.97	22.59	23.07	21.60	22.22	22.11	22.73	23.22
	12H	21.56	22.11	22.07	22.60	23.16	21.70	22.25	22.21	22.74	23.30
12H	4H	20.77	21.52	21.25	22.00	22.47	20.99	21.74	21.47	22.22	22.68
	6H	21.33	21.95	21.84	22.46	22.94	21.48	22.11	21.99	22.61	23.10
	8H	21.53	22.08	22.04	22.57	23.13	21.67	22.22	22.18	22.71	23.28