

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: P1439685

Luminaire Tested: S122DR-S290D935-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439685  
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-S290D935-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

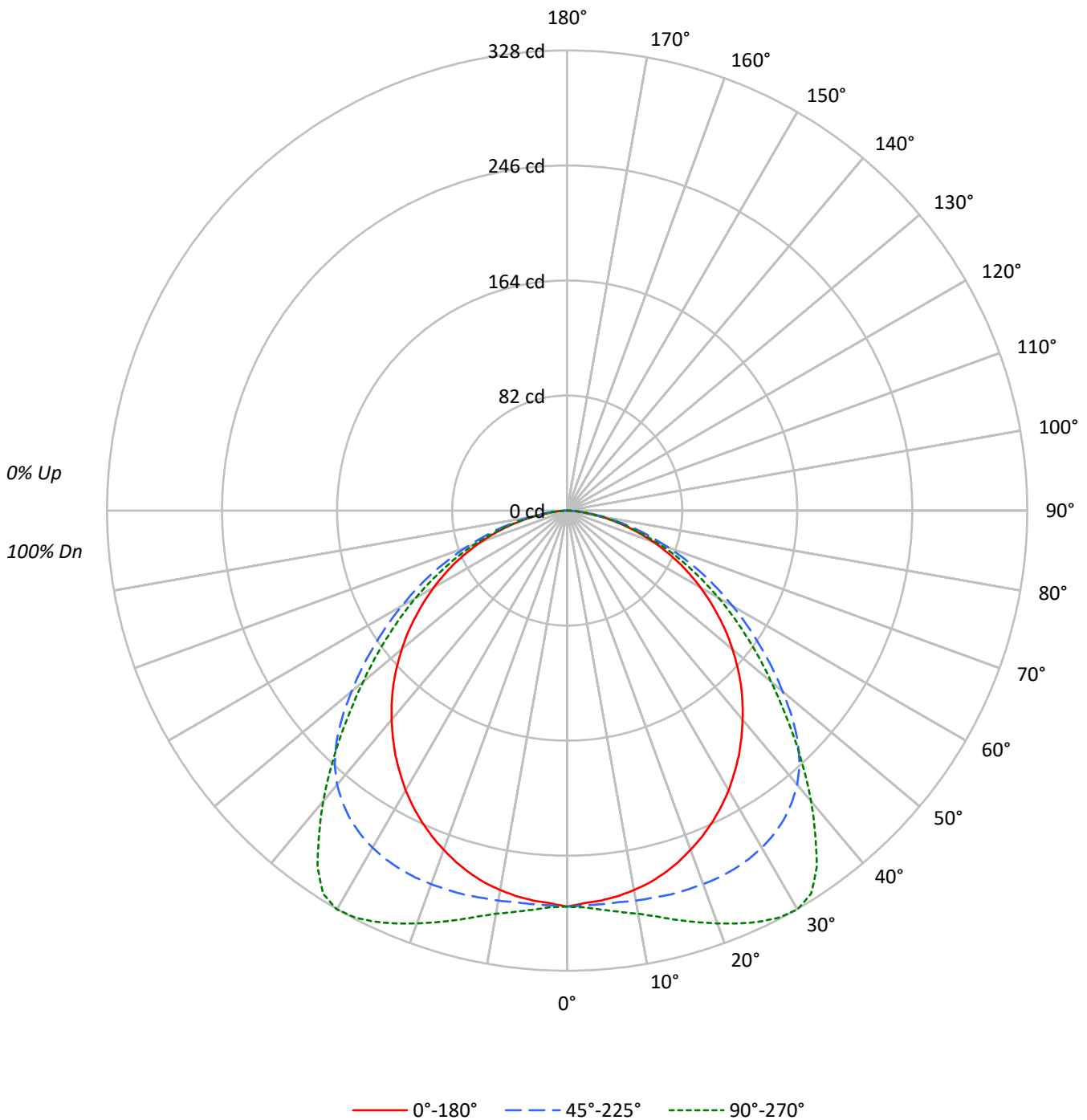
Lumens per Lamp: N/A  
Luminaire Lumens: 868.2 lumens  
Efficiency: N/A  
Efficacy: 68.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct

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	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°	5348	5348	5348
5°	5306	5356	5432
10°	5283	5431	5614
15°	5249	5559	5925
20°	5188	5714	6313
25°	5119	5893	6760
30°	5036	6071	7180
35°	4933	6224	7174
40°	4813	6309	6692
45°	4692	6227	6128
50°	4533	5907	5594
55°	4353	5543	5143
60°	4161	5161	4729
65°	3932	4756	4313
70°	3617	4249	3861
75°	3199	3682	3331
80°	2640	2924	2640
85°	1761	1913	1826

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 6275 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.0	3.1
10°-20°	80.6	9.3
20°-30°	130.8	15.1
30°-40°	165.6	19.1
40°-50°	165.8	19.1
50°-60°	138.9	16.0
60°-70°	97.9	11.3
70°-80°	50.5	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°	238.5	27.5
0°-40°	404.0	46.5
0°-60°	708.7	81.6
0°-90°	868.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	868.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	282	282	282	282	282	
5°	279	284	282	283	286	26
15°	268	275	283	295	302	75
25°	245	258	282	310	323	113
35°	213	230	269	304	310	133
45°	175	194	232	234	229	135
55°	132	148	168	161	156	118
65°	88	98	106	100	96	87
75°	44	48	50	47	46	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°	282.3	282.3	282.3	282.3	282.3
2.5°	280.1	284.5	281.6	281.9	283.0
5°	279.0	283.8	281.6	283.0	285.6
7.5°	277.2	282.3	281.6	284.5	288.5
10°	274.6	280.5	282.3	287.4	291.8
12.5°	271.7	277.9	282.7	290.7	296.3
15°	267.6	275.3	283.4	294.8	302.1
17.5°	262.8	272.0	283.4	299.2	307.6
20°	257.3	268.0	283.4	302.9	313.1
22.5°	251.5	263.2	283.0	306.2	318.6
25°	244.9	258.1	281.9	309.5	323.4
27.5°	237.9	252.2	280.1	312.0	327.1
30°	230.2	245.6	277.5	313.1	328.2
32.5°	221.7	238.6	273.9	310.9	323.8
35°	213.3	230.5	269.1	304.0	310.2
37.5°	204.1	222.1	262.8	290.4	290.4
40°	194.6	212.9	255.1	271.7	270.6
42.5°	185.0	203.4	245.2	253.3	249.6
45°	175.1	193.5	232.4	234.2	228.7
47.5°	164.5	182.5	217.3	214.8	208.5
50°	153.8	171.4	200.4	196.0	189.8
52.5°	143.2	160.1	184.3	178.0	172.5
55°	131.8	147.9	167.8	160.8	155.7
57.5°	120.8	135.8	152.0	144.3	139.9
60°	109.8	123.3	136.2	128.9	124.8
62.5°	98.8	110.5	121.1	113.8	110.1
65°	87.7	97.6	106.1	99.5	96.2
67.5°	76.4	85.2	91.0	85.2	83.0
70°	65.3	72.3	76.7	71.6	69.7
72.5°	54.3	60.2	63.1	59.1	57.3
75°	43.7	48.1	50.3	46.6	45.5
77.5°	33.4	36.7	37.8	35.2	33.8
80°	24.2	26.1	26.8	25.0	24.2
82.5°	15.1	16.5	17.3	15.8	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	17.31	18.92	17.67	19.24	19.55	17.83	19.44	18.19	19.75	20.07
	3H	18.88	20.33	19.26	20.66	21.02	19.29	20.75	19.67	21.07	21.43
	4H	19.42	20.78	19.82	21.13	21.51	19.79	21.15	20.18	21.50	21.88
	6H	19.76	21.03	20.17	21.39	21.78	20.09	21.35	20.50	21.72	22.11
	8H	19.84	21.05	20.27	21.44	21.84	20.16	21.37	20.58	21.75	22.15
	12H	19.88	21.04	20.31	21.42	21.85	20.19	21.35	20.62	21.73	22.16
4H	2H	18.06	19.43	18.46	19.78	20.15	18.46	19.83	18.86	20.18	20.55
	3H	19.84	20.98	20.25	21.37	21.77	20.13	21.27	20.54	21.67	22.07
	4H	20.48	21.51	20.91	21.92	22.36	20.72	21.75	21.15	22.16	22.60
	6H	20.93	21.82	21.38	22.26	22.72	21.12	22.02	21.58	22.46	22.91
	8H	21.04	21.87	21.50	22.32	22.78	21.22	22.06	21.68	22.50	22.97
	12H	21.10	21.85	21.58	22.32	22.79	21.28	22.03	21.76	22.51	22.98
8H	4H	20.77	21.60	21.23	22.05	22.51	20.98	21.82	21.44	22.26	22.73
	6H	21.30	22.00	21.80	22.49	22.96	21.47	22.16	21.96	22.65	23.12
	8H	21.46	22.09	21.97	22.59	23.08	21.61	22.23	22.12	22.74	23.23
	12H	21.57	22.12	22.08	22.61	23.17	21.71	22.26	22.22	22.75	23.31
12H	4H	20.78	21.53	21.26	22.01	22.48	21.00	21.75	21.48	22.22	22.69
	6H	21.33	21.96	21.84	22.46	22.95	21.49	22.12	22.00	22.62	23.11
	8H	21.54	22.09	22.05	22.58	23.14	21.68	22.23	22.19	22.72	23.28