

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: P1439634

Luminaire Tested: S122DR-H290D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439634
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-H290D830-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

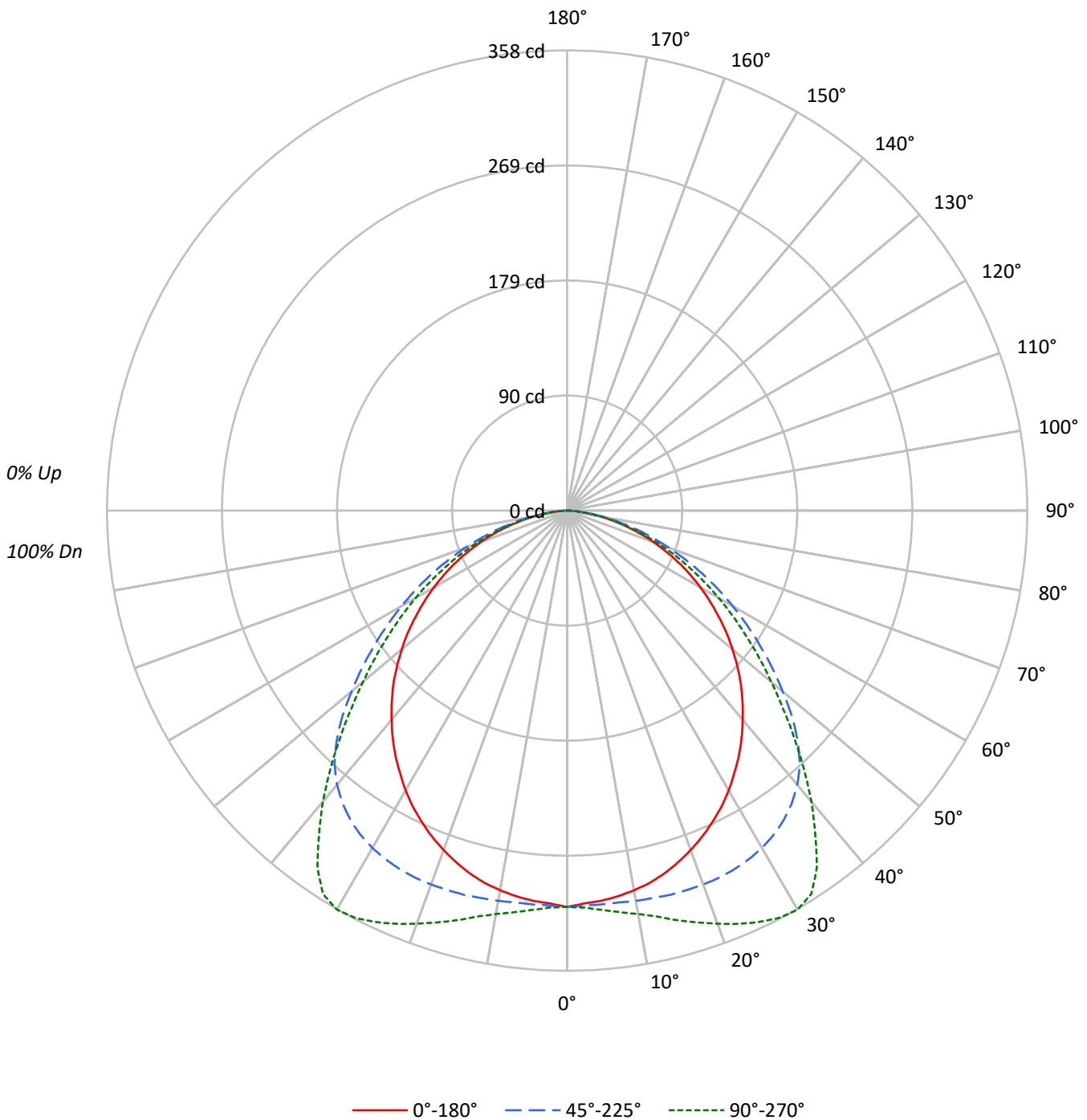
Lumens per Lamp: N/A
Luminaire Lumens: 948.1 lumens
Efficiency: N/A
Efficacy: 81.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	5841	5841	5841
5°	5795	5848	5932
10°	5770	5931	6131
15°	5731	6071	6471
20°	5665	6240	6895
25°	5590	6436	7383
30°	5500	6631	7841
35°	5387	6797	7834
40°	5256	6890	7308
45°	5123	6800	6693
50°	4952	6452	6110
55°	4753	6051	5615
60°	4543	5634	5165
65°	4295	5196	4707
70°	3955	4642	4221
75°	3492	4019	3638
80°	2891	3197	2891
85°	1913	2087	2000

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6854 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.5	3.1
10°-20°	88.1	9.3
20°-30°	142.9	15.1
30°-40°	180.8	19.1
40°-50°	181.1	19.1
50°-60°	151.6	16.0
60°-70°	106.9	11.3
70°-80°	55.1	5.8
80°-90°	12.2	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°	260.4	27.5
0°-40°	441.2	46.5
0°-60°	773.9	81.6
0°-90°	948.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	948.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	308	308	308	308	308	
5°	305	310	308	309	312	29
15°	292	301	310	322	330	82
25°	267	282	308	338	353	123
35°	233	252	294	332	339	146
45°	191	211	254	256	250	147
55°	144	162	183	176	170	129
65°	96	107	116	109	105	95
75°	48	52	55	51	50	51
85°	9	10	10	10	9	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	308.3	308.3	308.3	308.3	308.3
2.5°	305.9	310.7	307.5	307.9	309.1
5°	304.7	309.9	307.5	309.1	311.9
7.5°	302.7	308.3	307.5	310.7	315.1
10°	299.9	306.3	308.3	313.9	318.7
12.5°	296.7	303.5	308.7	317.5	323.5
15°	292.2	300.7	309.5	321.9	329.9
17.5°	287.0	297.1	309.5	326.7	335.9
20°	281.0	292.6	309.5	330.7	342.0
22.5°	274.6	287.4	309.1	334.3	348.0
25°	267.4	281.8	307.9	337.9	353.2
27.5°	259.8	275.4	305.9	340.8	357.2
30°	251.4	268.2	303.1	342.0	358.4
32.5°	242.1	260.6	299.1	339.6	353.6
35°	232.9	251.8	293.9	331.9	338.7
37.5°	222.9	242.5	287.0	317.1	317.1
40°	212.5	232.5	278.6	296.7	295.5
42.5°	202.0	222.1	267.8	276.6	272.6
45°	191.2	211.3	253.8	255.8	249.8
47.5°	179.6	199.2	237.3	234.5	227.7
50°	168.0	187.2	218.9	214.1	207.3
52.5°	156.3	174.8	201.2	194.4	188.4
55°	143.9	161.6	183.2	175.6	170.0
57.5°	131.9	148.3	166.0	157.5	152.7
60°	119.9	134.7	148.7	140.7	136.3
62.5°	107.8	120.7	132.3	124.3	120.3
65°	95.8	106.6	115.9	108.6	105.0
67.5°	83.4	93.0	99.4	93.0	90.6
70°	71.4	79.0	83.8	78.2	76.2
72.5°	59.3	65.7	69.0	64.5	62.5
75°	47.7	52.5	54.9	50.9	49.7
77.5°	36.5	40.1	41.3	38.5	36.9
80°	26.5	28.5	29.3	27.3	26.5
82.5°	16.4	18.0	18.8	17.2	16.8
85°	8.8	9.6	9.6	9.6	9.2
87.5°	3.2	4.0	4.0	4.0	3.6
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	17.62	19.23	17.98	19.54	19.86	18.13	19.74	18.49	20.05	20.37
	3H	19.19	20.64	19.56	20.97	21.33	19.60	21.05	19.97	21.38	21.74
	4H	19.72	21.09	20.12	21.44	21.81	20.09	21.46	20.49	21.80	22.18
	6H	20.07	21.33	20.48	21.70	22.09	20.39	21.66	20.80	22.02	22.41
	8H	20.15	21.36	20.57	21.75	22.14	20.46	21.67	20.89	22.06	22.46
	12H	20.19	21.34	20.62	21.72	22.15	20.50	21.65	20.93	22.03	22.46
4H	2H	18.37	19.74	18.77	20.08	20.46	18.77	20.13	19.17	20.48	20.86
	3H	20.14	21.28	20.55	21.68	22.08	20.44	21.57	20.85	21.97	22.37
	4H	20.79	21.82	21.22	22.23	22.67	21.03	22.06	21.46	22.47	22.91
	6H	21.23	22.13	21.69	22.57	23.03	21.43	22.32	21.88	22.76	23.22
	8H	21.34	22.18	21.80	22.62	23.09	21.53	22.36	21.99	22.81	23.27
	12H	21.40	22.15	21.88	22.63	23.10	21.58	22.34	22.07	22.81	23.28
8H	4H	21.07	21.91	21.53	22.35	22.82	21.29	22.12	21.75	22.57	23.03
	6H	21.61	22.31	22.11	22.79	23.27	21.77	22.47	22.27	22.95	23.43
	8H	21.77	22.39	22.28	22.90	23.39	21.92	22.54	22.43	23.04	23.53
	12H	21.87	22.42	22.38	22.92	23.48	22.02	22.57	22.52	23.06	23.62
12H	4H	21.09	21.84	21.57	22.31	22.78	21.30	22.05	21.78	22.53	23.00
	6H	21.64	22.26	22.15	22.77	23.26	21.80	22.42	22.31	22.93	23.42
	8H	21.85	22.40	22.35	22.89	23.45	21.99	22.54	22.49	23.03	23.59