

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: P1439687

Luminaire Tested: S122DR-S290D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439687
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-S290D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

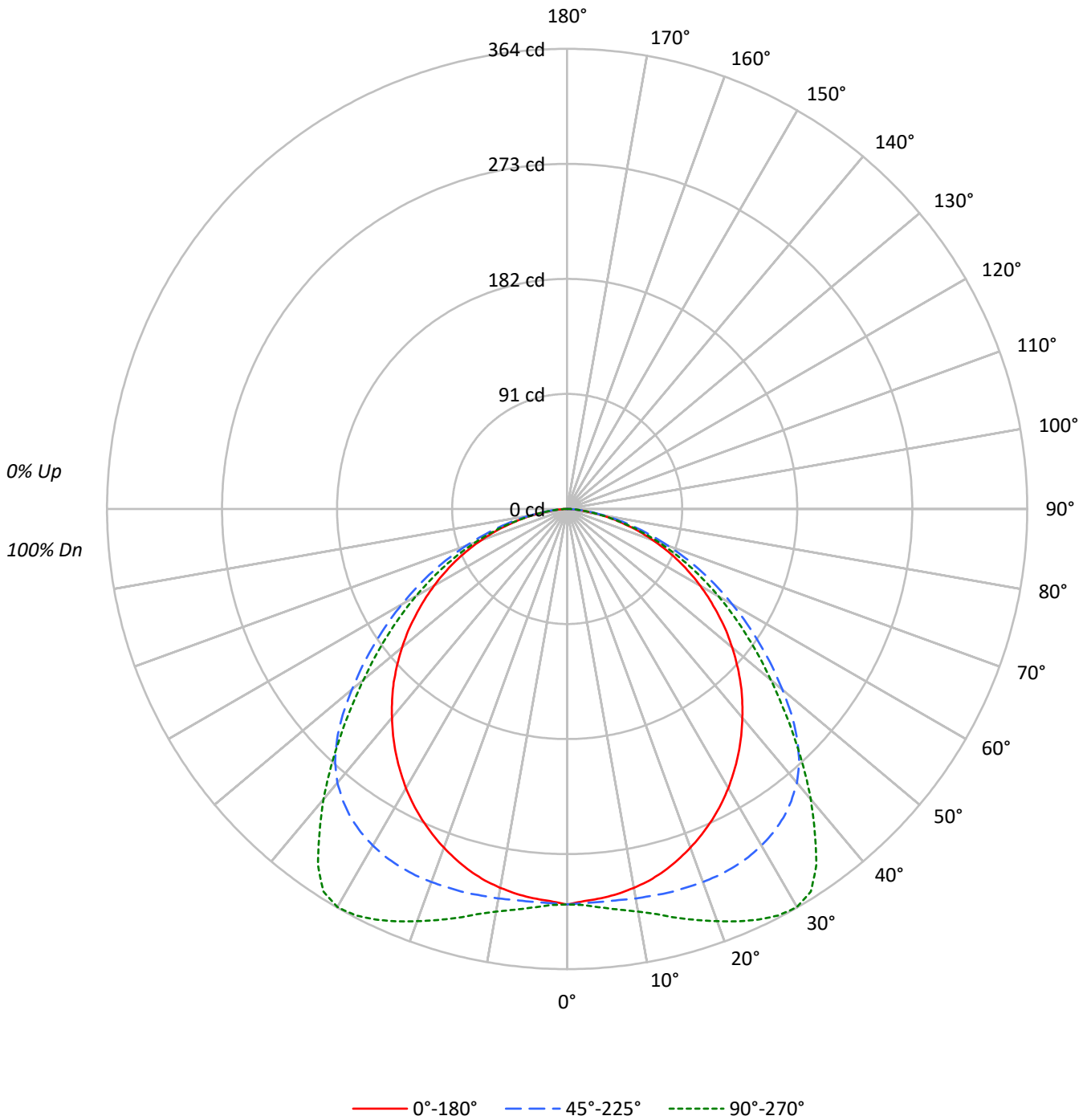
Lumens per Lamp: N/A
Luminaire Lumens: 962.1 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	5926	5926	5926
5°	5879	5934	6019
10°	5854	6018	6222
15°	5816	6159	6567
20°	5748	6331	6996
25°	5671	6531	7492
30°	5579	6727	7954
35°	5465	6897	7949
40°	5332	6992	7415
45°	5198	6899	6789
50°	5022	6546	6198
55°	4823	6140	5698
60°	4608	5718	5240
65°	4357	5272	4779
70°	4011	4708	4282
75°	3543	4077	3689
80°	2924	3240	2924
85°	1935	2130	2043

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6953 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.9	3.1
10°-20°	89.3	9.3
20°-30°	145.0	15.1
30°-40°	183.4	19.1
40°-50°	183.7	19.1
50°-60°	153.9	16.0
60°-70°	108.4	11.3
70°-80°	55.9	5.8
80°-90°	12.4	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°	264.2	27.5
0°-40°	447.7	46.5
0°-60°	785.3	81.6
0°-90°	962.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	962.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	313	313	313	313	313	
5°	309	314	312	314	316	29
15°	296	305	314	327	335	84
25°	271	286	312	343	358	125
35°	236	255	298	337	344	148
45°	194	214	258	260	253	149
55°	146	164	186	178	172	131
65°	97	108	118	110	107	96
75°	48	53	56	52	50	51
85°	9	10	10	10	9	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	312.8	312.8	312.8	312.8	312.8
2.5°	310.4	315.2	312.0	312.4	313.6
5°	309.1	314.4	312.0	313.6	316.5
7.5°	307.1	312.8	312.0	315.2	319.7
10°	304.3	310.8	312.8	318.5	323.4
12.5°	301.0	307.9	313.2	322.2	328.3
15°	296.5	305.1	314.0	326.6	334.8
17.5°	291.2	301.4	314.0	331.5	340.9
20°	285.1	296.9	314.0	335.6	347.0
22.5°	278.6	291.6	313.6	339.2	353.1
25°	271.3	286.0	312.4	342.9	358.4
27.5°	263.6	279.4	310.4	345.7	362.4
30°	255.0	272.1	307.5	347.0	363.6
32.5°	245.7	264.4	303.4	344.5	358.8
35°	236.3	255.4	298.2	336.8	343.7
37.5°	226.2	246.1	291.2	321.7	321.7
40°	215.6	235.9	282.7	301.0	299.8
42.5°	205.0	225.3	271.7	280.7	276.6
45°	194.0	214.4	257.5	259.5	253.4
47.5°	182.2	202.2	240.8	238.0	231.0
50°	170.4	190.0	222.1	217.2	210.3
52.5°	158.6	177.3	204.2	197.3	191.2
55°	146.0	163.9	185.9	178.2	172.5
57.5°	133.8	150.5	168.4	159.9	155.0
60°	121.6	136.7	150.9	142.8	138.3
62.5°	109.4	122.4	134.2	126.1	122.0
65°	97.2	108.2	117.6	110.2	106.6
67.5°	84.6	94.4	100.9	94.4	91.9
70°	72.4	80.1	85.0	79.3	77.3
72.5°	60.2	66.7	70.0	65.5	63.5
75°	48.4	53.3	55.7	51.7	50.4
77.5°	37.0	40.7	41.9	39.0	37.4
80°	26.8	28.9	29.7	27.7	26.8
82.5°	16.7	18.3	19.1	17.5	17.1
85°	8.9	9.8	9.8	9.8	9.4
87.5°	3.3	4.1	4.1	4.1	3.7
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	17.67	19.28	18.03	19.59	19.91	18.18	19.79	18.55	20.11	20.42
	3H	19.24	20.69	19.61	21.02	21.38	19.65	21.10	20.03	21.43	21.79
	4H	19.77	21.14	20.17	21.49	21.86	20.14	21.51	20.54	21.86	22.23
	6H	20.12	21.38	20.53	21.75	22.14	20.44	21.71	20.85	22.07	22.46
	8H	20.20	21.41	20.62	21.80	22.19	20.51	21.72	20.94	22.11	22.51
	12H	20.24	21.39	20.67	21.77	22.20	20.55	21.71	20.98	22.09	22.52
4H	2H	18.42	19.79	18.82	20.14	20.51	18.82	20.19	19.22	20.54	20.91
	3H	20.19	21.33	20.60	21.73	22.13	20.49	21.63	20.90	22.02	22.42
	4H	20.84	21.87	21.27	22.28	22.72	21.08	22.11	21.51	22.52	22.96
	6H	21.28	22.18	21.74	22.62	23.08	21.48	22.37	21.93	22.81	23.27
	8H	21.39	22.23	21.85	22.67	23.14	21.58	22.41	22.04	22.86	23.32
	12H	21.45	22.20	21.93	22.68	23.15	21.64	22.39	22.12	22.86	23.33
8H	4H	21.12	21.96	21.58	22.40	22.87	21.34	22.18	21.80	22.62	23.08
	6H	21.66	22.36	22.16	22.84	23.32	21.82	22.52	22.32	23.00	23.48
	8H	21.82	22.44	22.33	22.95	23.44	21.97	22.59	22.48	23.10	23.58
	12H	21.92	22.48	22.43	22.97	23.53	22.07	22.62	22.57	23.11	23.67
12H	4H	21.14	21.89	21.62	22.37	22.84	21.35	22.11	21.83	22.58	23.05
	6H	21.69	22.31	22.20	22.82	23.31	21.85	22.47	22.36	22.98	23.47
	8H	21.90	22.45	22.40	22.94	23.50	22.04	22.59	22.55	23.08	23.64