

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: P1439642

Luminaire Tested: S122DR-H290D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439642
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-H290D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

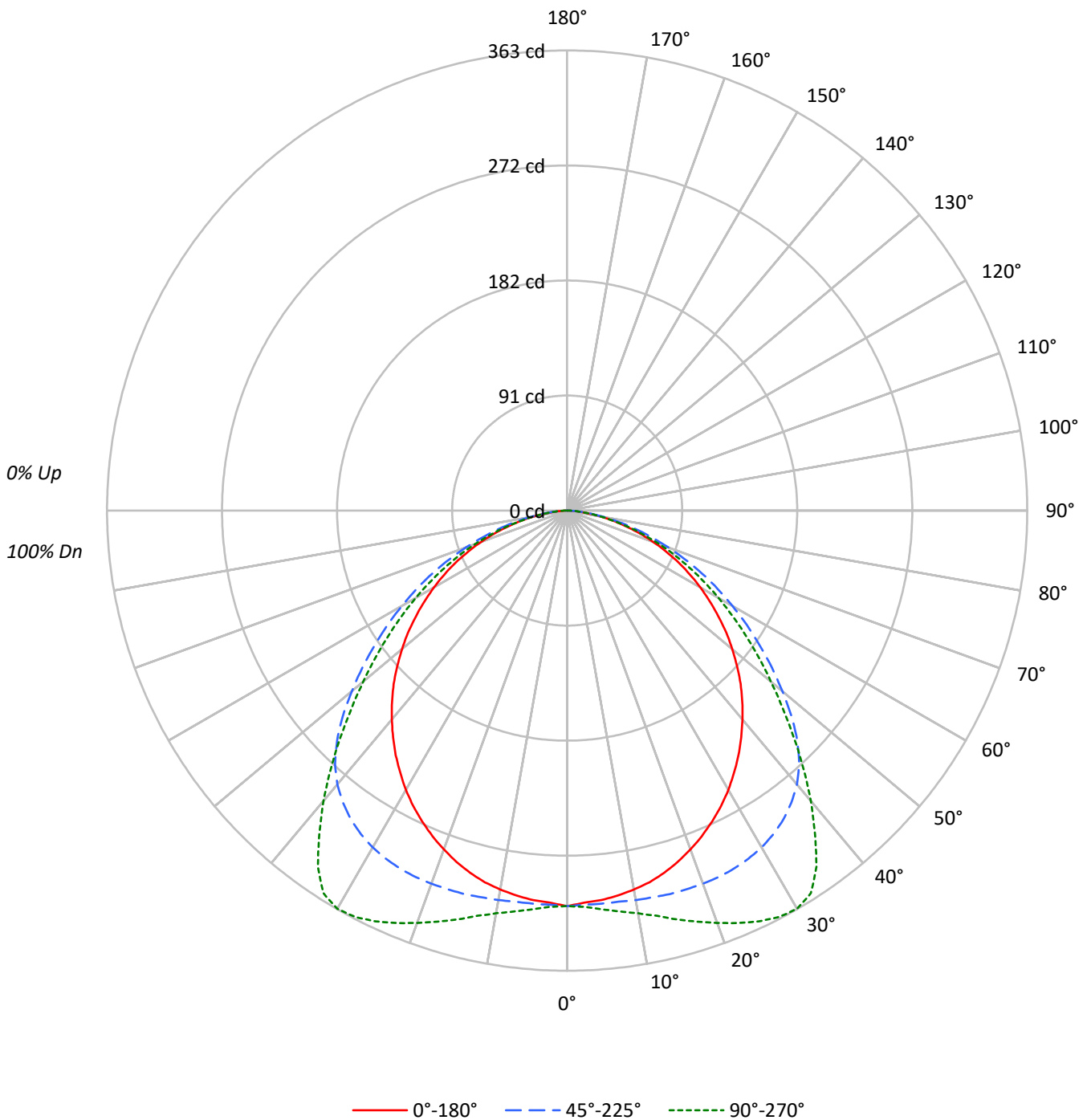
Lumens per Lamp: N/A
Luminaire Lumens: 959.6 lumens
Efficiency: N/A
Efficacy: 82.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P1439642

CATALOG NUMBER: S122DR-H290D950-X4F0-XX-UDD-FLB-W

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°	5911	5911	5911
5°	5865	5918	6004
10°	5839	6002	6206
15°	5802	6143	6549
20°	5734	6315	6978
25°	5657	6514	7473
30°	5565	6712	7935
35°	5451	6878	7931
40°	5320	6974	7395
45°	5185	6881	6773
50°	5011	6529	6184
55°	4813	6124	5681
60°	4596	5703	5229
65°	4348	5259	4765
70°	3999	4697	4271
75°	3536	4070	3682
80°	2924	3230	2924
85°	1935	2109	2022

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6937 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.8	3.1
10°-20°	89.1	9.3
20°-30°	144.6	15.1
30°-40°	183.0	19.1
40°-50°	183.3	19.1
50°-60°	153.5	16.0
60°-70°	108.2	11.3
70°-80°	55.8	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°	263.6	27.5
0°-40°	446.6	46.5
0°-60°	783.3	81.6
0°-90°	959.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	959.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	312	312	312	312	312	
5°	308	314	311	313	316	29
15°	296	304	313	326	334	83
25°	271	285	312	342	358	125
35°	236	255	297	336	343	147
45°	194	214	257	259	253	149
55°	146	164	185	178	172	130
65°	97	108	117	110	106	96
75°	48	53	56	52	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°	312.0	312.0	312.0	312.0	312.0
2.5°	309.6	314.5	311.2	311.6	312.8
5°	308.4	313.7	311.2	312.8	315.7
7.5°	306.3	312.0	311.2	314.5	318.9
10°	303.5	310.0	312.0	317.7	322.6
12.5°	300.3	307.2	312.4	321.4	327.4
15°	295.8	304.3	313.2	325.8	333.9
17.5°	290.5	300.7	313.2	330.7	340.0
20°	284.4	296.2	313.2	334.8	346.1
22.5°	277.9	290.9	312.8	338.4	352.2
25°	270.6	285.2	311.6	342.1	357.5
27.5°	262.9	278.8	309.6	344.9	361.5
30°	254.4	271.5	306.8	346.1	362.7
32.5°	245.1	263.7	302.7	343.7	357.9
35°	235.7	254.8	297.4	336.0	342.9
37.5°	225.6	245.5	290.5	321.0	321.0
40°	215.1	235.3	282.0	300.3	299.0
42.5°	204.5	224.8	271.0	280.0	275.9
45°	193.5	213.8	256.8	258.9	252.8
47.5°	181.8	201.7	240.2	237.4	230.5
50°	170.0	189.5	221.5	216.7	209.8
52.5°	158.2	176.9	203.7	196.8	190.7
55°	145.7	163.5	185.4	177.7	172.0
57.5°	133.5	150.1	168.0	159.5	154.6
60°	121.3	136.3	150.5	142.4	138.0
62.5°	109.1	122.1	133.9	125.8	121.7
65°	97.0	107.9	117.3	110.0	106.3
67.5°	84.4	94.1	100.6	94.1	91.7
70°	72.2	79.9	84.8	79.1	77.1
72.5°	60.1	66.5	69.8	65.3	63.3
75°	48.3	53.2	55.6	51.5	50.3
77.5°	36.9	40.6	41.8	39.0	37.3
80°	26.8	28.8	29.6	27.6	26.8
82.5°	16.6	18.3	19.1	17.4	17.0
85°	8.9	9.7	9.7	9.7	9.3
87.5°	3.2	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	17.66	19.27	18.02	19.58	19.90	18.17	19.79	18.54	20.10	20.41
	3H	19.23	20.68	19.61	21.01	21.37	19.64	21.09	20.02	21.42	21.78
	4H	19.76	21.13	20.16	21.48	21.86	20.13	21.50	20.53	21.85	22.22
	6H	20.11	21.37	20.52	21.74	22.13	20.43	21.70	20.84	22.06	22.45
	8H	20.19	21.40	20.62	21.79	22.19	20.51	21.71	20.93	22.10	22.50
	12H	20.23	21.38	20.66	21.76	22.19	20.54	21.70	20.97	22.08	22.51
4H	2H	18.41	19.78	18.81	20.13	20.50	18.81	20.18	19.21	20.53	20.90
	3H	20.18	21.32	20.59	21.72	22.12	20.48	21.62	20.89	22.02	22.42
	4H	20.83	21.86	21.26	22.27	22.71	21.07	22.10	21.50	22.51	22.95
	6H	21.27	22.17	21.73	22.61	23.07	21.47	22.36	21.92	22.80	23.26
	8H	21.38	22.22	21.85	22.66	23.13	21.57	22.41	22.03	22.85	23.31
	12H	21.44	22.20	21.92	22.67	23.14	21.63	22.38	22.11	22.85	23.32
8H	4H	21.11	21.95	21.57	22.39	22.86	21.33	22.17	21.79	22.61	23.07
	6H	21.65	22.35	22.15	22.84	23.31	21.81	22.51	22.31	23.00	23.47
	8H	21.81	22.43	22.32	22.94	23.43	21.96	22.58	22.47	23.09	23.57
	12H	21.92	22.47	22.42	22.96	23.52	22.06	22.61	22.56	23.10	23.66
12H	4H	21.13	21.88	21.61	22.36	22.83	21.34	22.10	21.83	22.57	23.04
	6H	21.68	22.31	22.19	22.81	23.30	21.84	22.46	22.35	22.97	23.46
	8H	21.89	22.44	22.39	22.93	23.49	22.03	22.58	22.54	23.07	23.63