

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: P1439637

Luminaire Tested: S122DR-H290D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439637
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-H290D850-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

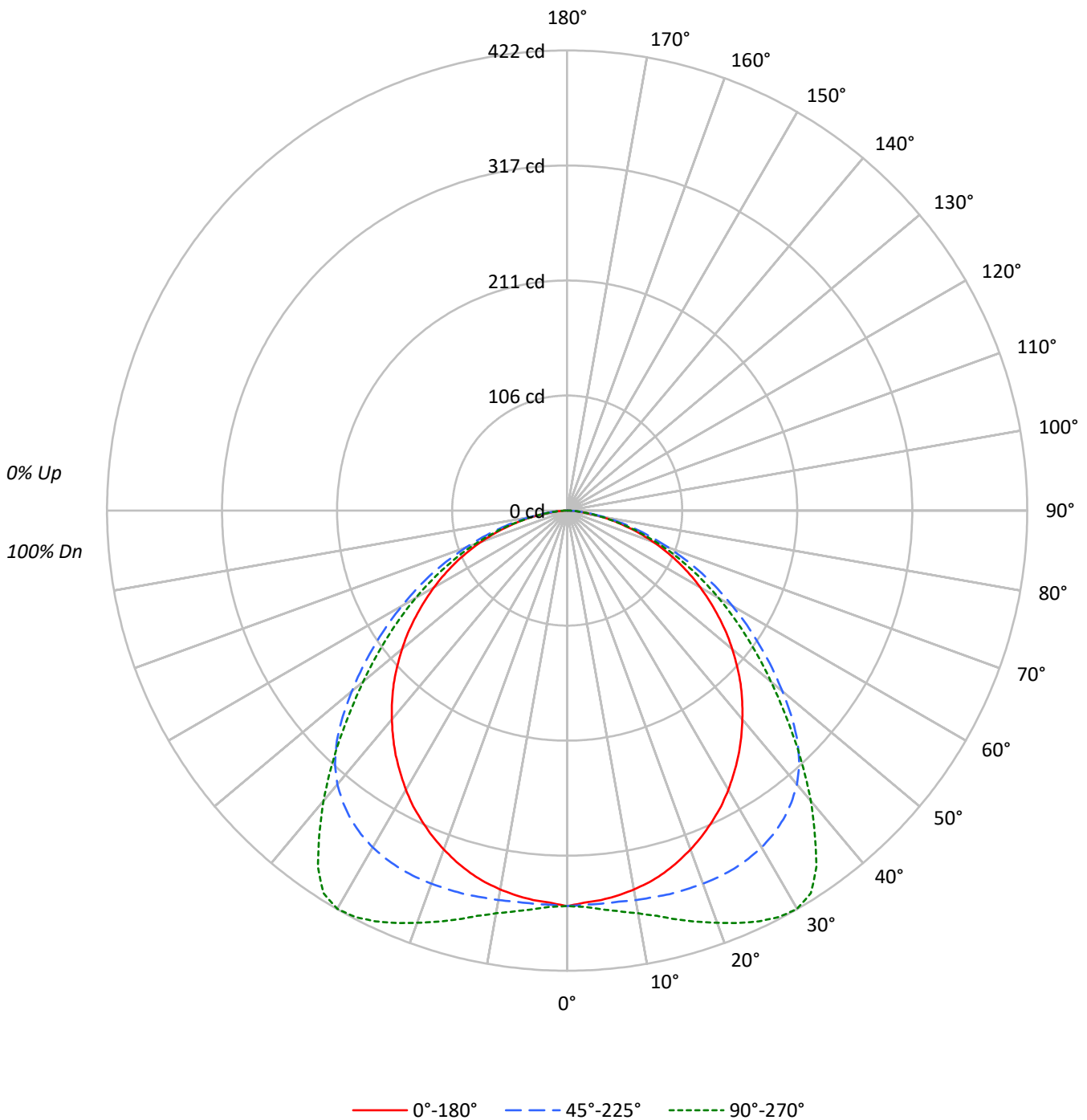
Lumens per Lamp: N/A
Luminaire Lumens: 1115.6 lumens
Efficiency: N/A
Efficacy: 95.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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°	6872	6872	6872
5°	6818	6881	6980
10°	6787	6978	7214
15°	6745	7142	7614
20°	6667	7341	8111
25°	6577	7574	8688
30°	6469	7801	9225
35°	6337	7996	9219
40°	6183	8107	8597
45°	6029	8001	7875
50°	5824	7590	7189
55°	5592	7122	6606
60°	5343	6631	6078
65°	5052	6110	5541
70°	4653	5462	4963
75°	4107	4729	4282
80°	3393	3753	3393
85°	2261	2456	2348

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8062 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.7	3.1
10°-20°	103.6	9.3
20°-30°	168.1	15.1
30°-40°	212.7	19.1
40°-50°	213.0	19.1
50°-60°	178.4	16.0
60°-70°	125.7	11.3
70°-80°	64.9	5.8
80°-90°	14.4	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°	306.4	27.5
0°-40°	519.1	46.5
0°-60°	910.6	81.6
0°-90°	1115.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1115.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	363	363	363	363	363	
5°	358	365	362	364	367	34
15°	344	354	364	379	388	97
25°	315	332	362	398	416	145
35°	274	296	346	391	399	171
45°	225	249	299	301	294	173
55°	169	190	216	207	200	152
65°	113	126	136	128	124	111
75°	56	62	65	60	58	60
85°	10	11	11	11	11	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	362.7	362.7	362.7	362.7	362.7
2.5°	359.9	365.6	361.8	362.3	363.7
5°	358.5	364.6	361.8	363.7	367.0
7.5°	356.1	362.7	361.8	365.6	370.7
10°	352.8	360.4	362.7	369.3	375.0
12.5°	349.0	357.1	363.2	373.6	380.7
15°	343.9	353.8	364.1	378.8	388.2
17.5°	337.7	349.5	364.1	384.4	395.3
20°	330.7	344.3	364.1	389.1	402.3
22.5°	323.1	338.2	363.7	393.4	409.4
25°	314.6	331.6	362.3	397.6	415.6
27.5°	305.7	324.0	359.9	400.9	420.3
30°	295.7	315.6	356.6	402.3	421.7
32.5°	284.9	306.6	351.9	399.5	416.0
35°	274.0	296.2	345.7	390.6	398.6
37.5°	262.3	285.4	337.7	373.1	373.1
40°	250.0	273.6	327.8	349.0	347.6
42.5°	237.7	261.3	315.1	325.5	320.7
45°	225.0	248.6	298.6	300.9	293.9
47.5°	211.3	234.4	279.2	275.9	267.9
50°	197.6	220.3	257.5	251.9	243.9
52.5°	184.0	205.7	236.8	228.8	221.7
55°	169.3	190.1	215.6	206.6	200.0
57.5°	155.2	174.5	195.3	185.4	179.7
60°	141.0	158.5	175.0	165.6	160.4
62.5°	126.9	142.0	155.7	146.2	141.5
65°	112.7	125.5	136.3	127.8	123.6
67.5°	98.1	109.4	117.0	109.4	106.6
70°	84.0	92.9	98.6	92.0	89.6
72.5°	69.8	77.4	81.1	75.9	73.6
75°	56.1	61.8	64.6	59.9	58.5
77.5°	42.9	47.2	48.6	45.3	43.4
80°	31.1	33.5	34.4	32.1	31.1
82.5°	19.3	21.2	22.2	20.3	19.8
85°	10.4	11.3	11.3	11.3	10.8
87.5°	3.8	4.7	4.7	4.7	4.2
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	18.18	19.79	18.55	20.11	20.42	18.70	20.31	19.06	20.62	20.94
	3H	19.75	21.21	20.13	21.53	21.89	20.16	21.62	20.54	21.94	22.30
	4H	20.29	21.65	20.69	22.00	22.38	20.66	22.02	21.05	22.37	22.75
	6H	20.63	21.90	21.04	22.26	22.65	20.96	22.22	21.37	22.59	22.98
	8H	20.71	21.92	21.14	22.31	22.71	21.03	22.24	21.45	22.62	23.02
	12H	20.75	21.91	21.18	22.29	22.72	21.06	22.22	21.49	22.60	23.03
4H	2H	18.94	20.30	19.33	20.65	21.03	19.33	20.70	19.73	21.05	21.42
	3H	20.71	21.85	21.12	22.24	22.64	21.00	22.14	21.41	22.54	22.94
	4H	21.35	22.38	21.79	22.80	23.23	21.59	22.62	22.03	23.04	23.47
	6H	21.80	22.69	22.25	23.13	23.59	21.99	22.89	22.45	23.33	23.78
	8H	21.91	22.74	22.37	23.19	23.65	22.09	22.93	22.55	23.37	23.84
	12H	21.97	22.72	22.45	23.19	23.66	22.15	22.90	22.63	23.38	23.85
8H	4H	21.64	22.47	22.10	22.92	23.38	21.85	22.69	22.31	23.13	23.60
	6H	22.18	22.87	22.67	23.36	23.83	22.34	23.03	22.83	23.52	23.99
	8H	22.33	22.96	22.84	23.46	23.95	22.48	23.10	22.99	23.61	24.10
	12H	22.44	22.99	22.95	23.48	24.04	22.58	23.13	23.09	23.62	24.18
12H	4H	21.65	22.40	22.13	22.88	23.35	21.87	22.62	22.35	23.09	23.56
	6H	22.20	22.83	22.71	23.34	23.82	22.36	22.99	22.87	23.49	23.98
	8H	22.41	22.96	22.92	23.45	24.01	22.55	23.10	23.06	23.59	24.16