

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: P1439646

Luminaire Tested: S122DR-H485D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439646
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-H485D850-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

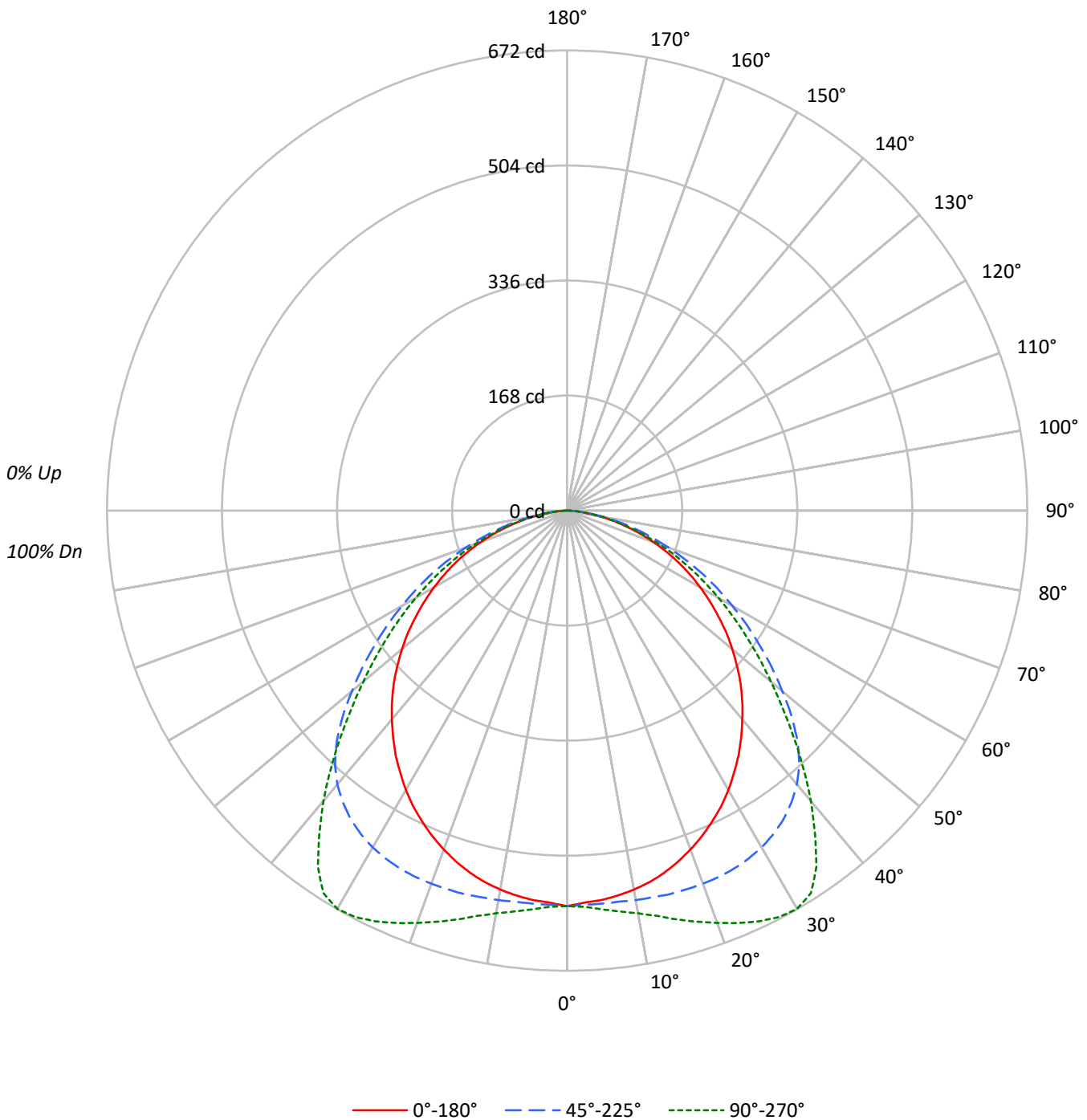
Lumens per Lamp: N/A
Luminaire Lumens: 1776.6 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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°	10943	10943	10943
5°	10858	10956	11114
10°	10810	11112	11489
15°	10741	11374	12125
20°	10617	11692	12918
25°	10473	12060	13835
30°	10304	12424	14690
35°	10093	12735	14680
40°	9846	12913	13692
45°	9600	12740	12539
50°	9276	12087	11445
55°	8908	11340	10520
60°	8510	10560	9678
65°	8047	9733	8822
70°	7406	8697	7905
75°	6544	7532	6815
80°	5412	5979	5412
85°	3587	3913	3761

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 12839 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.2	3.1
10°-20°	165.0	9.3
20°-30°	267.7	15.1
30°-40°	338.8	19.1
40°-50°	339.3	19.1
50°-60°	284.2	16.0
60°-70°	200.3	11.3
70°-80°	103.3	5.8
80°-90°	22.9	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°	488.0	27.5
0°-40°	826.7	46.5
0°-60°	1450.1	81.6
0°-90°	1776.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1776.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	578	578	578	578	578	
5°	571	581	576	579	584	54
15°	548	563	580	603	618	154
25°	501	528	577	633	662	231
35°	436	472	551	622	635	273
45°	358	396	476	479	468	276
55°	270	303	343	329	318	241
65°	180	200	217	204	197	177
75°	89	98	103	95	93	95
85°	16	18	18	18	17	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	577.6	577.6	577.6	577.6	577.6
2.5°	573.1	582.1	576.1	576.9	579.1
5°	570.9	580.6	576.1	579.1	584.4
7.5°	567.1	577.6	576.1	582.1	590.4
10°	561.9	573.9	577.6	588.2	597.2
12.5°	555.9	568.6	578.4	594.9	606.2
15°	547.6	563.4	579.9	603.2	618.2
17.5°	537.8	556.6	579.9	612.2	629.5
20°	526.6	548.3	579.9	619.7	640.7
22.5°	514.5	538.6	579.1	626.5	652.0
25°	501.0	528.1	576.9	633.2	661.8
27.5°	486.8	516.0	573.1	638.5	669.3
30°	471.0	502.5	567.9	640.7	671.5
32.5°	453.7	488.3	560.4	636.2	662.5
35°	436.4	471.7	550.6	622.0	634.7
37.5°	417.6	454.5	537.8	594.2	594.2
40°	398.1	435.7	522.1	555.9	553.6
42.5°	378.6	416.1	501.8	518.3	510.8
45°	358.3	395.9	475.5	479.2	468.0
47.5°	336.5	373.3	444.7	439.4	426.7
50°	314.7	350.8	410.1	401.1	388.3
52.5°	293.0	327.5	377.1	364.3	353.0
55°	269.7	302.7	343.3	329.0	318.5
57.5°	247.1	277.9	311.0	295.2	286.2
60°	224.6	252.4	278.7	263.7	255.4
62.5°	202.1	226.1	247.9	232.9	225.3
65°	179.5	199.8	217.1	203.6	196.8
67.5°	156.2	174.3	186.3	174.3	169.8
70°	133.7	148.0	157.0	146.5	142.7
72.5°	111.2	123.2	129.2	120.9	117.2
75°	89.4	98.4	102.9	95.4	93.1
77.5°	68.4	75.1	77.4	72.1	69.1
80°	49.6	53.3	54.8	51.1	49.6
82.5°	30.8	33.8	35.3	32.3	31.5
85°	16.5	18.0	18.0	18.0	17.3
87.5°	6.0	7.5	7.5	7.5	6.8
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	19.80	21.41	20.16	21.72	22.04	20.31	21.92	20.68	22.24	22.55
	3H	21.37	22.82	21.75	23.15	23.51	21.78	23.23	22.16	23.56	23.92
	4H	21.91	23.27	22.30	23.62	24.00	22.27	23.64	22.67	23.99	24.36
	6H	22.25	23.51	22.66	23.88	24.27	22.57	23.84	22.98	24.20	24.59
	8H	22.33	23.54	22.76	23.93	24.33	22.65	23.85	23.07	24.24	24.64
	12H	22.37	23.52	22.80	23.91	24.33	22.68	23.84	23.11	24.22	24.65
4H	2H	20.55	21.92	20.95	22.27	22.64	20.95	22.32	21.35	22.66	23.04
	3H	22.32	23.46	22.73	23.86	24.26	22.62	23.76	23.03	24.16	24.56
	4H	22.97	24.00	23.40	24.41	24.85	23.21	24.24	23.64	24.65	25.09
	6H	23.41	24.31	23.87	24.75	25.21	23.61	24.50	24.06	24.94	25.40
	8H	23.52	24.36	23.98	24.80	25.27	23.71	24.55	24.17	24.99	25.45
	12H	23.58	24.34	24.06	24.81	25.28	23.77	24.52	24.25	24.99	25.46
8H	4H	23.25	24.09	23.71	24.53	25.00	23.47	24.31	23.93	24.75	25.21
	6H	23.79	24.49	24.29	24.98	25.45	23.95	24.65	24.45	25.14	25.61
	8H	23.95	24.57	24.46	25.08	25.57	24.10	24.72	24.61	25.23	25.71
	12H	24.06	24.61	24.56	25.10	25.66	24.20	24.75	24.70	25.24	25.80
12H	4H	23.27	24.02	23.75	24.50	24.97	23.48	24.24	23.96	24.71	25.18
	6H	23.82	24.44	24.33	24.95	25.44	23.98	24.60	24.49	25.11	25.60
	8H	24.03	24.58	24.53	25.07	25.63	24.17	24.72	24.68	25.21	25.77