

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: P1439647

Luminaire Tested: S122DR-H485D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439647
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-H485D927-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

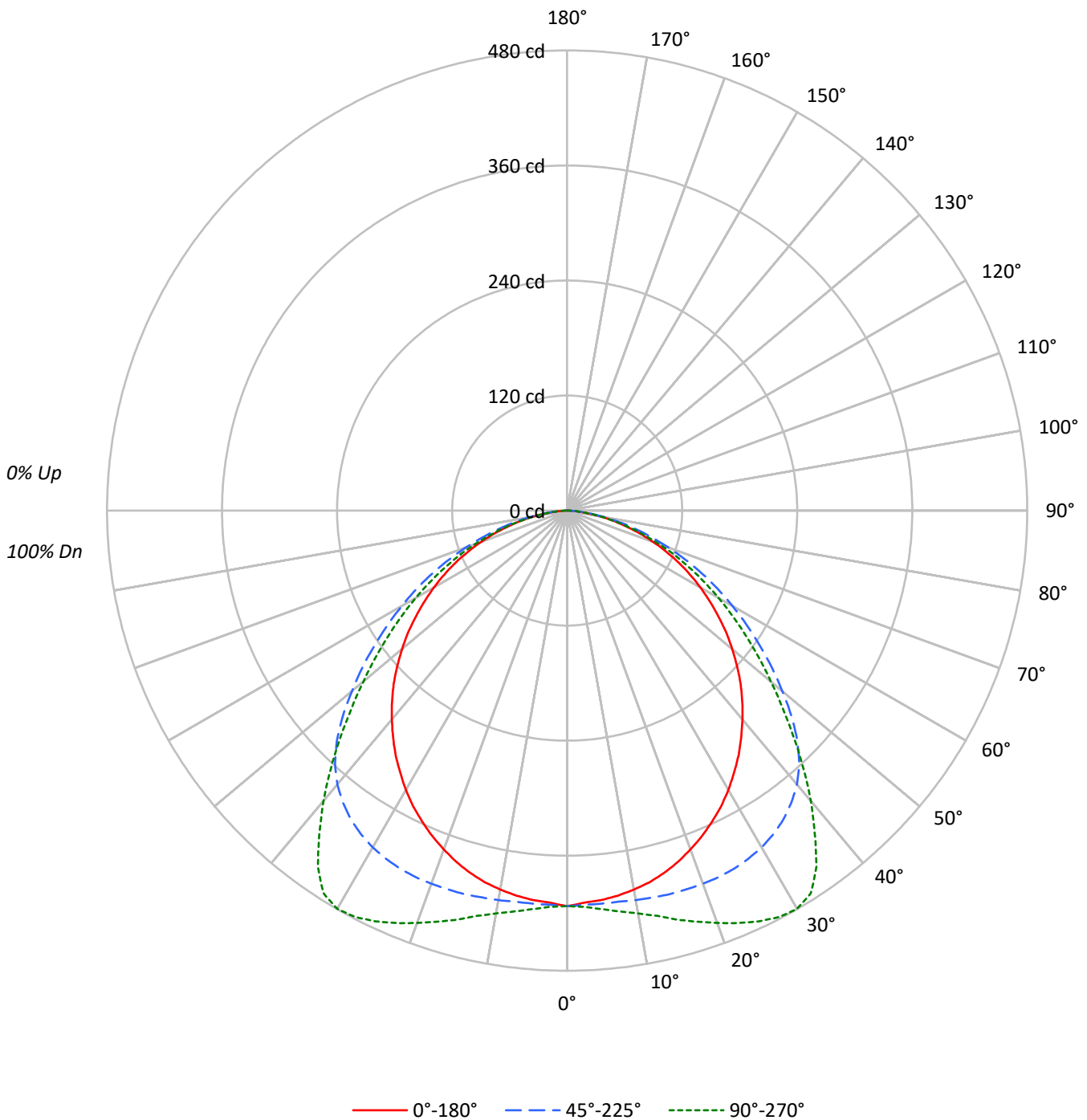
Lumens per Lamp: N/A
Luminaire Lumens: 1269.0 lumens
Efficiency: N/A
Efficacy: 73.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	7817	7817	7817
5°	7756	7826	7938
10°	7722	7938	8207
15°	7673	8124	8662
20°	7583	8351	9228
25°	7482	8615	9882
30°	7359	8873	10494
35°	7209	9096	10487
40°	7034	9223	9782
45°	6856	9099	8957
50°	6626	8636	8176
55°	6362	8099	7515
60°	6078	7544	6911
65°	5747	6953	6303
70°	5290	6210	5645
75°	4678	5380	4868
80°	3862	4277	3862
85°	2565	2804	2674

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9171 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.5	3.1
10°-20°	117.9	9.3
20°-30°	191.2	15.1
30°-40°	242.0	19.1
40°-50°	242.3	19.1
50°-60°	203.0	16.0
60°-70°	143.0	11.3
70°-80°	73.8	5.8
80°-90°	16.4	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°	348.6	27.5
0°-40°	590.5	46.5
0°-60°	1035.8	81.6
0°-90°	1269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1269.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	413	413	413	413	413	
5°	408	415	412	414	417	39
15°	391	402	414	431	442	110
25°	358	377	412	452	473	165
35°	312	337	393	444	453	195
45°	256	283	340	342	334	197
55°	193	216	245	235	228	172
65°	128	143	155	145	141	127
75°	64	70	74	68	66	68
85°	12	13	13	13	12	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	412.6	412.6	412.6	412.6	412.6
2.5°	409.4	415.8	411.5	412.1	413.7
5°	407.8	414.8	411.5	413.7	417.4
7.5°	405.1	412.6	411.5	415.8	421.7
10°	401.4	409.9	412.6	420.1	426.6
12.5°	397.1	406.2	413.2	425.0	433.0
15°	391.2	402.4	414.2	430.9	441.6
17.5°	384.2	397.6	414.2	437.3	449.6
20°	376.1	391.7	414.2	442.7	457.7
22.5°	367.5	384.7	413.7	447.5	465.7
25°	357.9	377.2	412.1	452.3	472.7
27.5°	347.7	368.6	409.4	456.1	478.1
30°	336.4	359.0	405.6	457.7	479.7
32.5°	324.1	348.8	400.3	454.5	473.3
35°	311.7	337.0	393.3	444.3	453.4
37.5°	298.3	324.6	384.2	424.4	424.4
40°	284.4	311.2	372.9	397.1	395.5
42.5°	270.4	297.3	358.4	370.2	364.9
45°	255.9	282.8	339.6	342.3	334.3
47.5°	240.4	266.7	317.6	313.9	304.8
50°	224.8	250.6	293.0	286.5	277.4
52.5°	209.3	233.9	269.4	260.2	252.2
55°	192.6	216.2	245.2	235.0	227.5
57.5°	176.5	198.5	222.1	210.9	204.4
60°	160.4	180.3	199.1	188.3	182.4
62.5°	144.3	161.5	177.1	166.3	161.0
65°	128.2	142.7	155.1	145.4	140.6
67.5°	111.6	124.5	133.1	124.5	121.3
70°	95.5	105.7	112.1	104.6	101.9
72.5°	79.4	88.0	92.3	86.4	83.7
75°	63.9	70.3	73.5	68.1	66.5
77.5°	48.8	53.7	55.3	51.5	49.4
80°	35.4	38.1	39.2	36.5	35.4
82.5°	22.0	24.1	25.2	23.1	22.5
85°	11.8	12.9	12.9	12.9	12.3
87.5°	4.3	5.4	5.4	5.4	4.8
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	18.63	20.24	18.99	20.55	20.87	19.14	20.76	19.51	21.07	21.38
	3H	20.20	21.65	20.58	21.98	22.34	20.61	22.06	20.99	22.39	22.75
	4H	20.74	22.10	21.13	22.45	22.83	21.10	22.47	21.50	22.82	23.19
	6H	21.08	22.34	21.49	22.71	23.10	21.40	22.67	21.81	23.03	23.42
	8H	21.16	22.37	21.59	22.76	23.16	21.48	22.68	21.90	23.07	23.47
	12H	21.20	22.35	21.63	22.74	23.16	21.51	22.67	21.94	23.05	23.48
4H	2H	19.38	20.75	19.78	21.10	21.47	19.78	21.15	20.18	21.50	21.87
	3H	21.15	22.29	21.56	22.69	23.09	21.45	22.59	21.86	22.99	23.39
	4H	21.80	22.83	22.23	23.24	23.68	22.04	23.07	22.47	23.48	23.92
	6H	22.25	23.14	22.70	23.58	24.04	22.44	23.33	22.89	23.78	24.23
	8H	22.35	23.19	22.82	23.64	24.10	22.54	23.38	23.00	23.82	24.28
	12H	22.42	23.17	22.90	23.64	24.11	22.60	23.35	23.08	23.82	24.29
8H	4H	22.08	22.92	22.55	23.36	23.83	22.30	23.14	22.76	23.58	24.05
	6H	22.62	23.32	23.12	23.81	24.28	22.78	23.48	23.28	23.97	24.44
	8H	22.78	23.41	23.29	23.91	24.40	22.93	23.55	23.44	24.06	24.54
	12H	22.89	23.44	23.39	23.93	24.49	23.03	23.58	23.54	24.07	24.63
12H	4H	22.10	22.85	22.58	23.33	23.80	22.32	23.07	22.80	23.54	24.01
	6H	22.65	23.28	23.16	23.78	24.27	22.81	23.43	23.32	23.94	24.43
	8H	22.86	23.41	23.36	23.90	24.46	23.00	23.55	23.51	24.04	24.60