

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: P1439693

Luminaire Tested: S122DR-S485D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439693  
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-S485D930-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

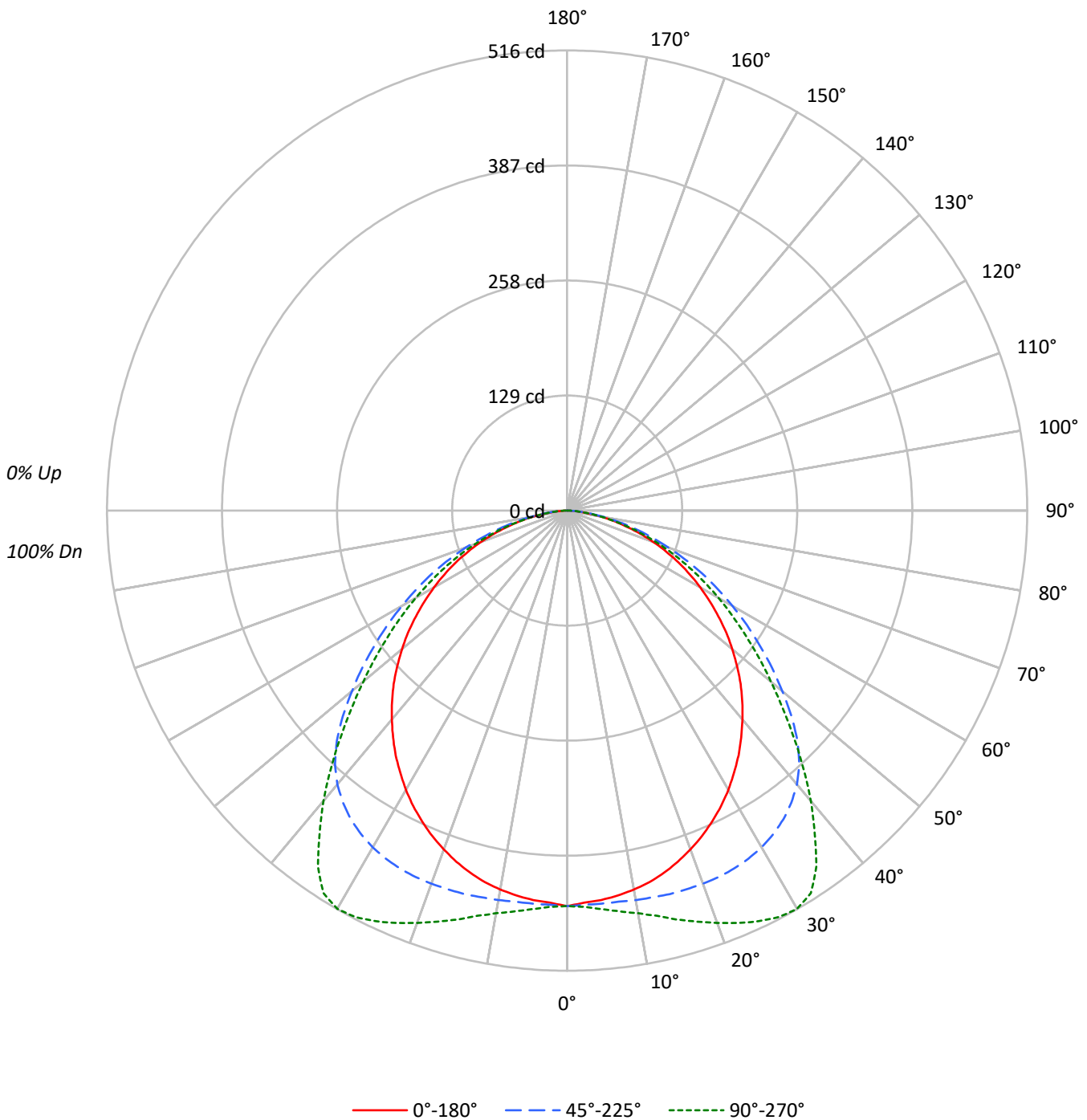
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1364.0 lumens  
Efficiency: N/A  
Efficacy: 71.4 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): 19.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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°	8402	8402	8402
5°	8336	8414	8533
10°	8299	8532	8821
15°	8246	8732	9311
20°	8151	8976	9920
25°	8042	9259	10622
30°	7911	9538	11280
35°	7750	9776	11271
40°	7561	9913	10514
45°	7371	9782	9627
50°	7124	9282	8789
55°	6837	8707	8076
60°	6533	8109	7431
65°	6178	7473	6774
70°	5689	6675	6071
75°	5022	5783	5234
80°	4157	4593	4157
85°	2761	3000	2891

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 9860 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.4	3.1
10°-20°	126.7	9.3
20°-30°	205.6	15.1
30°-40°	260.1	19.1
40°-50°	260.5	19.1
50°-60°	218.2	16.0
60°-70°	153.7	11.3
70°-80°	79.3	5.8
80°-90°	17.6	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°	374.6	27.5
0°-40°	634.7	46.5
0°-60°	1113.4	81.6
0°-90°	1364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1364.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	444	444	444	444	444	
5°	438	446	442	445	449	42
15°	420	433	445	463	475	119
25°	385	405	443	486	508	177
35°	335	362	423	478	487	209
45°	275	304	365	368	359	212
55°	207	232	264	253	244	185
65°	138	153	167	156	151	136
75°	69	76	79	73	72	73
85°	13	14	14	14	13	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	443.5	443.5	443.5	443.5	443.5
2.5°	440.1	447.0	442.4	442.9	444.7
5°	438.3	445.8	442.4	444.7	448.7
7.5°	435.4	443.5	442.4	447.0	453.3
10°	431.4	440.6	443.5	451.6	458.5
12.5°	426.8	436.6	444.1	456.8	465.4
15°	420.4	432.6	445.2	463.1	474.7
17.5°	412.9	427.4	445.2	470.0	483.3
20°	404.3	421.0	445.2	475.8	492.0
22.5°	395.1	413.5	444.7	481.0	500.6
25°	384.7	405.4	442.9	486.2	508.1
27.5°	373.7	396.2	440.1	490.2	513.9
30°	361.6	385.8	436.0	492.0	515.6
32.5°	348.3	374.9	430.2	488.5	508.7
35°	335.1	362.2	422.7	477.5	487.3
37.5°	320.7	348.9	412.9	456.2	456.2
40°	305.7	334.5	400.8	426.8	425.1
42.5°	290.7	319.5	385.3	397.9	392.2
45°	275.1	303.9	365.1	368.0	359.3
47.5°	258.4	286.6	341.4	337.4	327.6
50°	241.7	269.3	314.9	308.0	298.2
52.5°	224.9	251.5	289.5	279.7	271.1
55°	207.0	232.4	263.6	252.6	244.5
57.5°	189.7	213.4	238.8	226.7	219.7
60°	172.4	193.8	214.0	202.4	196.1
62.5°	155.1	173.6	190.3	178.8	173.0
65°	137.8	153.4	166.7	156.3	151.1
67.5°	120.0	133.8	143.0	133.8	130.3
70°	102.7	113.6	120.5	112.5	109.6
72.5°	85.4	94.6	99.2	92.9	90.0
75°	68.6	75.6	79.0	73.2	71.5
77.5°	52.5	57.7	59.4	55.4	53.1
80°	38.1	40.9	42.1	39.2	38.1
82.5°	23.6	26.0	27.1	24.8	24.2
85°	12.7	13.8	13.8	13.8	13.3
87.5°	4.6	5.8	5.8	5.8	5.2
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	18.88	20.49	19.24	20.81	21.12	19.39	21.01	19.76	21.32	21.63
	3H	20.45	21.90	20.83	22.23	22.59	20.86	22.31	21.24	22.64	23.00
	4H	20.99	22.35	21.39	22.70	23.08	21.35	22.72	21.75	23.07	23.44
	6H	21.33	22.60	21.74	22.96	23.35	21.66	22.92	22.07	23.28	23.68
	8H	21.41	22.62	21.84	23.01	23.41	21.73	22.93	22.15	23.32	23.72
	12H	21.45	22.61	21.88	22.99	23.42	21.76	22.92	22.19	23.30	23.73
4H	2H	19.63	21.00	20.03	21.35	21.72	20.03	21.40	20.43	21.75	22.12
	3H	21.41	22.55	21.82	22.94	23.34	21.70	22.84	22.11	23.24	23.64
	4H	22.05	23.08	22.49	23.50	23.93	22.29	23.32	22.72	23.73	24.17
	6H	22.50	23.39	22.95	23.83	24.29	22.69	23.59	23.14	24.03	24.48
	8H	22.61	23.44	23.07	23.89	24.35	22.79	23.63	23.25	24.07	24.54
	12H	22.67	23.42	23.15	23.89	24.36	22.85	23.60	23.33	24.08	24.55
8H	4H	22.34	23.17	22.80	23.62	24.08	22.55	23.39	23.01	23.83	24.30
	6H	22.87	23.57	23.37	24.06	24.53	23.04	23.73	23.53	24.22	24.69
	8H	23.03	23.66	23.54	24.16	24.65	23.18	23.80	23.69	24.31	24.80
	12H	23.14	23.69	23.65	24.18	24.74	23.28	23.83	23.79	24.32	24.88
12H	4H	22.35	23.10	22.83	23.58	24.05	22.57	23.32	23.05	23.79	24.26
	6H	22.90	23.53	23.41	24.03	24.52	23.06	23.69	23.57	24.19	24.68
	8H	23.11	23.66	23.62	24.15	24.71	23.25	23.80	23.76	24.29	24.85