

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: P1439650

Luminaire Tested: S122DR-H485D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439650
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-H485D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

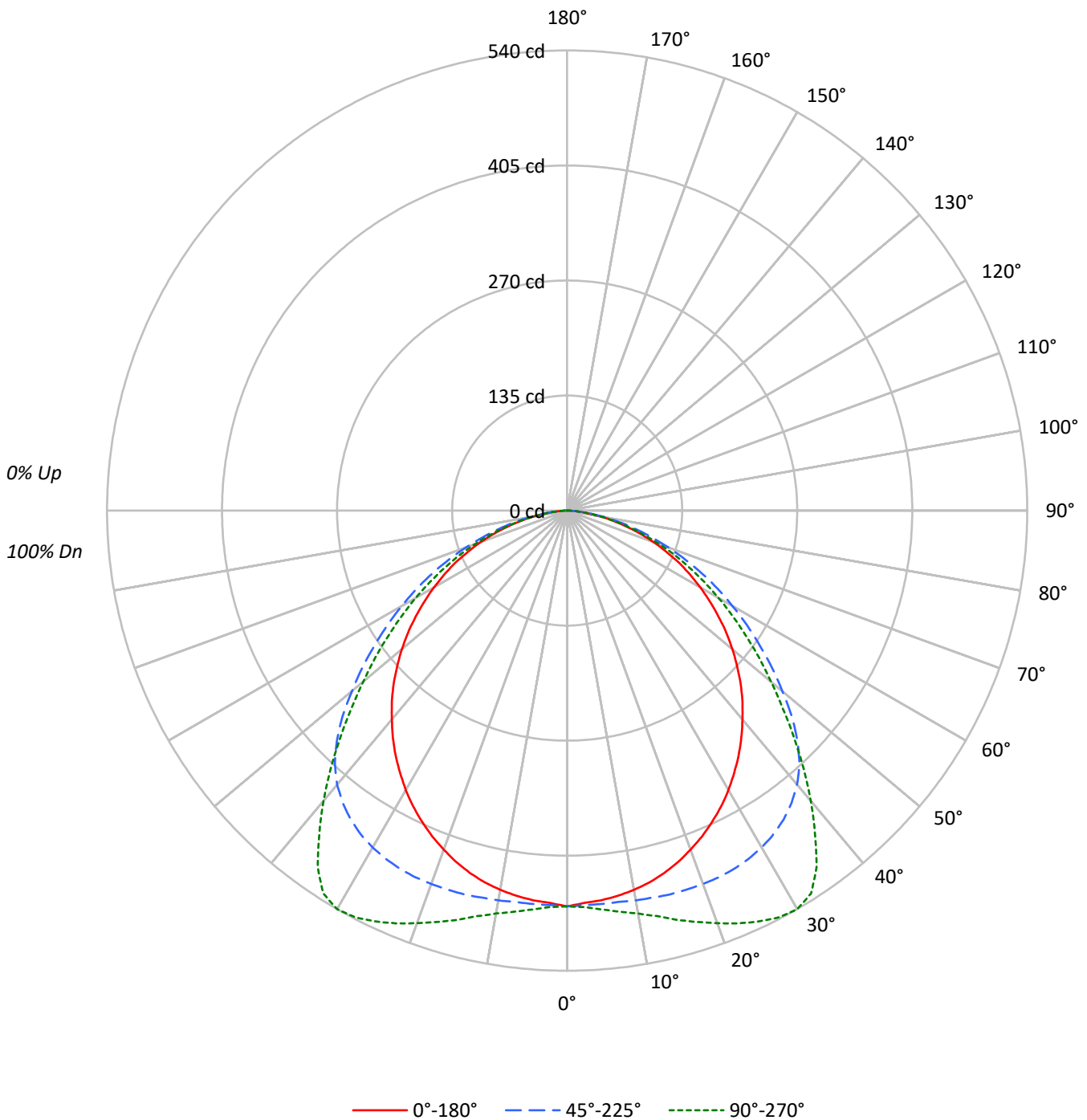
Lumens per Lamp: N/A
Luminaire Lumens: 1428.5 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (A_{in}): 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°	8800	8800	8800
5°	8729	8811	8937
10°	8692	8936	9238
15°	8636	9146	9750
20°	8536	9401	10387
25°	8422	9698	11123
30°	8285	9989	11813
35°	8116	10239	11805
40°	7917	10383	11008
45°	7719	10243	10082
50°	7460	9721	9205
55°	7161	9117	8459
60°	6843	8492	7783
65°	6473	7827	7092
70°	5955	6991	6359
75°	5263	6054	5483
80°	4353	4812	4353
85°	2891	3152	3022

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 10324 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	3.1
10°-20°	132.7	9.3
20°-30°	215.3	15.1
30°-40°	272.4	19.1
40°-50°	272.8	19.1
50°-60°	228.5	16.0
60°-70°	161.0	11.3
70°-80°	83.1	5.8
80°-90°	18.4	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°	392.4	27.5
0°-40°	664.7	46.5
0°-60°	1166.0	81.6
0°-90°	1428.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1428.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	464	464	464	464	464	
5°	459	467	463	466	470	44
15°	440	453	466	485	497	124
25°	403	425	464	509	532	186
35°	351	379	443	500	510	219
45°	288	318	382	385	376	222
55°	217	243	276	264	256	194
65°	144	161	175	164	158	143
75°	72	79	83	77	75	76
85°	13	14	14	14	14	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	464.5	464.5	464.5	464.5	464.5
2.5°	460.8	468.1	463.3	463.9	465.7
5°	459.0	466.9	463.3	465.7	469.9
7.5°	456.0	464.5	463.3	468.1	474.7
10°	451.8	461.4	464.5	472.9	480.2
12.5°	446.9	457.2	465.1	478.4	487.4
15°	440.3	453.0	466.3	485.0	497.1
17.5°	432.5	447.6	466.3	492.2	506.1
20°	423.4	440.9	466.3	498.3	515.2
22.5°	413.7	433.1	465.7	503.7	524.3
25°	402.9	424.6	463.9	509.2	532.1
27.5°	391.4	414.9	460.8	513.4	538.1
30°	378.7	404.1	456.6	515.2	540.0
32.5°	364.8	392.6	450.6	511.6	532.7
35°	350.9	379.3	442.7	500.1	510.4
37.5°	335.8	365.4	432.5	477.7	477.7
40°	320.1	350.3	419.8	446.9	445.1
42.5°	304.4	334.6	403.5	416.7	410.7
45°	288.1	318.3	382.3	385.3	376.3
47.5°	270.6	300.2	357.6	353.3	343.1
50°	253.1	282.1	329.8	322.5	312.3
52.5°	235.6	263.3	303.2	292.9	283.9
55°	216.8	243.4	276.0	264.5	256.1
57.5°	198.7	223.5	250.0	237.4	230.1
60°	180.6	202.9	224.1	212.0	205.4
62.5°	162.5	181.8	199.3	187.2	181.2
65°	144.4	160.7	174.6	163.7	158.2
67.5°	125.6	140.1	149.8	140.1	136.5
70°	107.5	119.0	126.2	117.8	114.8
72.5°	89.4	99.1	103.9	97.2	94.2
75°	71.9	79.1	82.7	76.7	74.9
77.5°	55.0	60.4	62.2	58.0	55.6
80°	39.9	42.9	44.1	41.1	39.9
82.5°	24.8	27.2	28.4	26.0	25.4
85°	13.3	14.5	14.5	14.5	13.9
87.5°	4.8	6.0	6.0	6.0	5.4
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	19.04	20.65	19.41	20.97	21.28	19.55	21.17	19.92	21.48	21.80
	3H	20.61	22.06	20.99	22.39	22.75	21.02	22.48	21.40	22.80	23.16
	4H	21.15	22.51	21.55	22.86	23.24	21.51	22.88	21.91	23.23	23.61
	6H	21.49	22.76	21.90	23.12	23.51	21.82	23.08	22.23	23.45	23.84
	8H	21.57	22.78	22.00	23.17	23.57	21.89	23.10	22.31	23.48	23.88
	12H	21.61	22.77	22.04	23.15	23.58	21.92	23.08	22.35	23.46	23.89
4H	2H	19.80	21.16	20.19	21.51	21.89	20.19	21.56	20.59	21.91	22.28
	3H	21.57	22.71	21.98	23.10	23.50	21.86	23.00	22.27	23.40	23.80
	4H	22.21	23.24	22.65	23.66	24.09	22.45	23.48	22.88	23.89	24.33
	6H	22.66	23.55	23.11	23.99	24.45	22.85	23.75	23.31	24.19	24.64
	8H	22.77	23.60	23.23	24.05	24.51	22.95	23.79	23.41	24.23	24.70
	12H	22.83	23.58	23.31	24.06	24.52	23.01	23.76	23.49	24.24	24.71
8H	4H	22.50	23.33	22.96	23.78	24.24	22.71	23.55	23.17	23.99	24.46
	6H	23.04	23.73	23.53	24.22	24.69	23.20	23.89	23.69	24.38	24.85
	8H	23.19	23.82	23.71	24.32	24.81	23.34	23.96	23.85	24.47	24.96
	12H	23.30	23.85	23.81	24.34	24.90	23.44	23.99	23.95	24.48	25.04
12H	4H	22.51	23.26	22.99	23.74	24.21	22.73	23.48	23.21	23.95	24.42
	6H	23.06	23.69	23.57	24.20	24.68	23.22	23.85	23.73	24.35	24.84
	8H	23.27	23.82	23.78	24.31	24.87	23.41	23.96	23.92	24.45	25.01