

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: P1439643

Luminaire Tested: S122DR-H485D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439643
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-H485D830-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

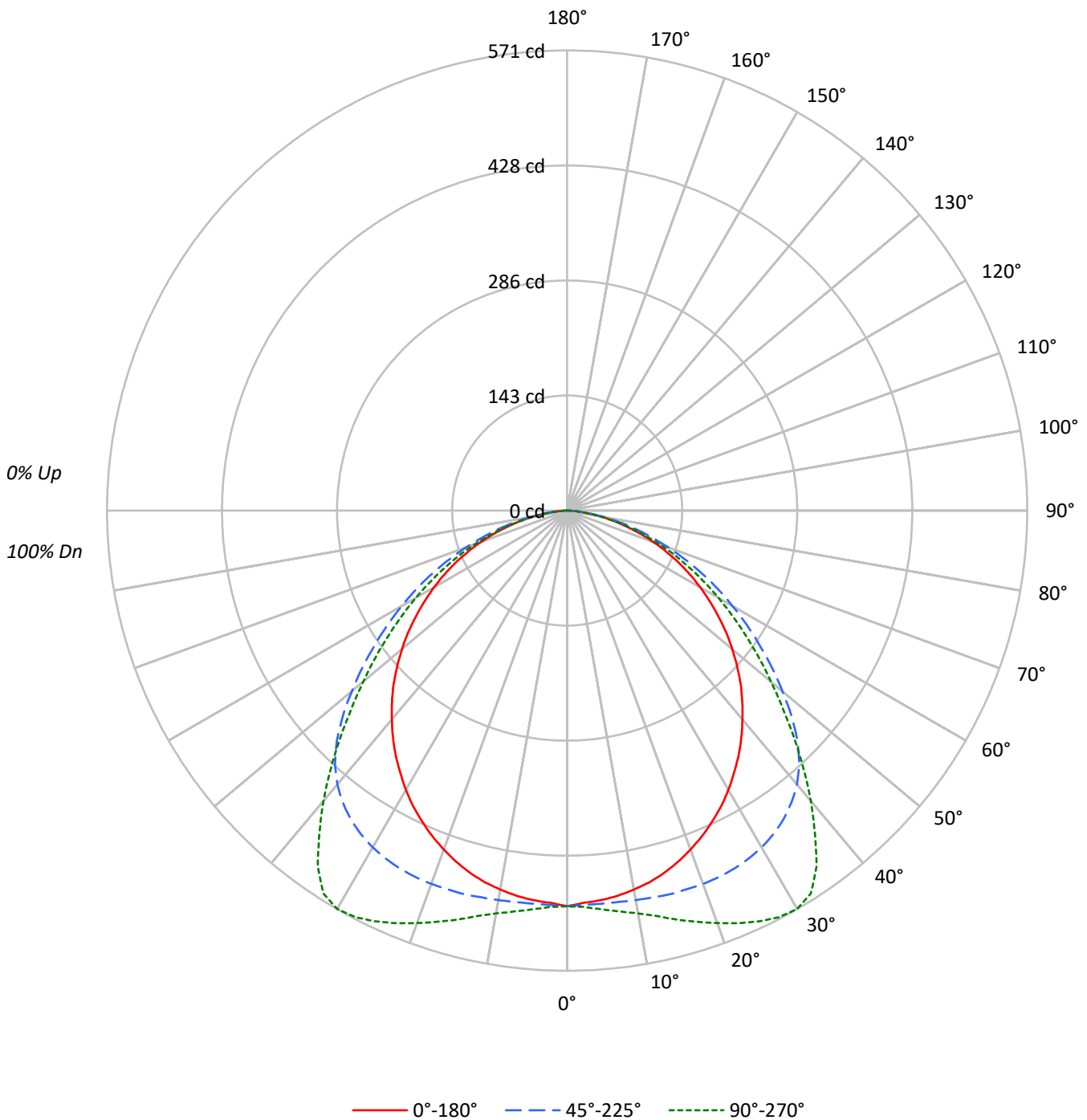
Lumens per Lamp: N/A
Luminaire Lumens: 1509.9 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	9301	9301	9301
5°	9228	9313	9446
10°	9186	9444	9763
15°	9128	9668	10305
20°	9022	9938	10980
25°	8901	10249	11757
30°	8757	10558	12485
35°	8578	10824	12478
40°	8369	10974	11636
45°	8159	10827	10656
50°	7884	10275	9730
55°	7571	9638	8942
60°	7234	8977	8226
65°	6841	8271	7500
70°	6293	7390	6719
75°	5563	6405	5798
80°	4593	5084	4593
85°	3043	3326	3195

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 10913 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.9	3.1
10°-20°	140.2	9.3
20°-30°	227.5	15.1
30°-40°	287.9	19.1
40°-50°	288.3	19.1
50°-60°	241.5	16.0
60°-70°	170.2	11.3
70°-80°	87.8	5.8
80°-90°	19.5	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°	414.7	27.5
0°-40°	702.6	46.5
0°-60°	1232.5	81.6
0°-90°	1509.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1509.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	491	491	491	491	491	
5°	485	494	490	492	497	46
15°	465	479	493	513	525	131
25°	426	449	490	538	562	196
35°	371	401	468	529	540	232
45°	304	336	404	407	398	235
55°	229	257	292	280	271	205
65°	153	170	184	173	167	151
75°	76	84	88	81	79	81
85°	14	15	15	15	15	18
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	490.9	490.9	490.9	490.9	490.9
2.5°	487.1	494.8	489.7	490.3	492.2
5°	485.2	493.5	489.7	492.2	496.7
7.5°	482.0	490.9	489.7	494.8	501.8
10°	477.5	487.7	490.9	499.9	507.5
12.5°	472.4	483.3	491.6	505.6	515.2
15°	465.4	478.8	492.9	512.6	525.4
17.5°	457.1	473.1	492.9	520.3	535.0
20°	447.5	466.0	492.9	526.7	544.6
22.5°	437.3	457.7	492.2	532.4	554.1
25°	425.8	448.8	490.3	538.2	562.4
27.5°	413.7	438.6	487.1	542.7	568.8
30°	400.3	427.1	482.6	544.6	570.7
32.5°	385.6	415.0	476.3	540.7	563.1
35°	370.9	400.9	468.0	528.6	539.5
37.5°	355.0	386.2	457.1	505.0	505.0
40°	338.4	370.3	443.7	472.4	470.5
42.5°	321.8	353.7	426.5	440.5	434.1
45°	304.5	336.4	404.1	407.3	397.7
47.5°	286.0	317.3	377.9	373.5	362.6
50°	267.5	298.1	348.6	340.9	330.1
52.5°	249.0	278.3	320.5	309.6	300.1
55°	229.2	257.3	291.8	279.6	270.7
57.5°	210.0	236.2	264.3	250.9	243.2
60°	190.9	214.5	236.9	224.1	217.1
62.5°	171.7	192.2	210.7	197.9	191.5
65°	152.6	169.8	184.5	173.0	167.3
67.5°	132.8	148.1	158.3	148.1	144.3
70°	113.6	125.8	133.4	124.5	121.3
72.5°	94.5	104.7	109.8	102.8	99.6
75°	76.0	83.6	87.5	81.1	79.2
77.5°	58.1	63.8	65.8	61.3	58.7
80°	42.1	45.3	46.6	43.4	42.1
82.5°	26.2	28.7	30.0	27.5	26.8
85°	14.0	15.3	15.3	15.3	14.7
87.5°	5.1	6.4	6.4	6.4	5.7
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	19.23	20.85	19.60	21.16	21.47	19.75	21.36	20.11	21.67	21.99
	3H	20.80	22.26	21.18	22.58	22.94	21.21	22.67	21.59	22.99	23.35
	4H	21.34	22.71	21.74	23.05	23.43	21.71	23.07	22.11	23.42	23.80
	6H	21.68	22.95	22.09	23.31	23.70	22.01	23.27	22.42	23.64	24.03
	8H	21.77	22.97	22.19	23.36	23.76	22.08	23.29	22.51	23.68	24.08
	12H	21.80	22.96	22.23	23.34	23.77	22.11	23.27	22.54	23.65	24.08
4H	2H	19.99	21.35	20.39	21.70	22.08	20.39	21.75	20.78	22.10	22.48
	3H	21.76	22.90	22.17	23.30	23.70	22.05	23.19	22.46	23.59	23.99
	4H	22.41	23.43	22.84	23.85	24.28	22.65	23.67	23.08	24.09	24.52
	6H	22.85	23.74	23.30	24.19	24.64	23.04	23.94	23.50	24.38	24.84
	8H	22.96	23.80	23.42	24.24	24.70	23.14	23.98	23.60	24.42	24.89
	12H	23.02	23.77	23.50	24.25	24.72	23.20	23.95	23.68	24.43	24.90
8H	4H	22.69	23.53	23.15	23.97	24.43	22.90	23.74	23.37	24.18	24.65
	6H	23.23	23.92	23.72	24.41	24.89	23.39	24.08	23.88	24.57	25.05
	8H	23.39	24.01	23.90	24.52	25.00	23.53	24.15	24.04	24.66	25.15
	12H	23.49	24.04	24.00	24.53	25.09	23.63	24.18	24.14	24.67	25.24
12H	4H	22.70	23.46	23.18	23.93	24.40	22.92	23.67	23.40	24.15	24.62
	6H	23.26	23.88	23.77	24.39	24.87	23.41	24.04	23.93	24.55	25.03
	8H	23.46	24.01	23.97	24.50	25.06	23.60	24.15	24.11	24.64	25.21