

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: P1439688

Luminaire Tested: S122DR-S485D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439688
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-S485D830-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

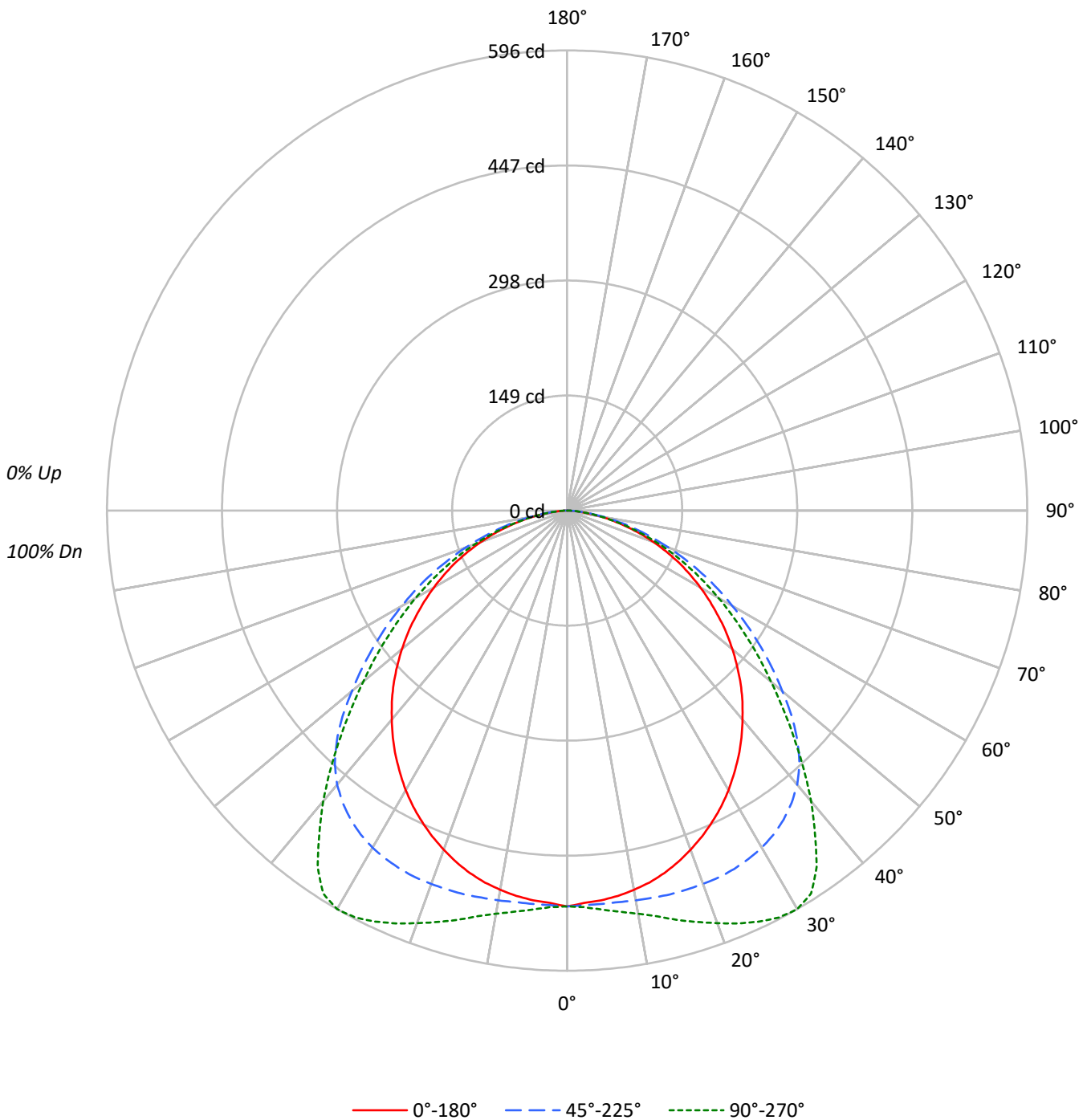
Lumens per Lamp: N/A
Luminaire Lumens: 1577.0 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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°	9714	9714	9714
5°	9637	9726	9865
10°	9594	9863	10198
15°	9534	10095	10762
20°	9424	10377	11466
25°	9296	10705	12279
30°	9147	11028	13041
35°	8960	11303	13031
40°	8740	11461	12153
45°	8520	11310	11130
50°	8235	10729	10160
55°	7908	10065	9338
60°	7556	9374	8590
65°	7146	8639	7832
70°	6575	7722	7018
75°	5805	6683	6054
80°	4801	5313	4801
85°	3195	3478	3326

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 11398 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.0	3.1
10°-20°	146.5	9.3
20°-30°	237.6	15.1
30°-40°	300.7	19.1
40°-50°	301.1	19.1
50°-60°	252.2	16.0
60°-70°	177.8	11.3
70°-80°	91.7	5.8
80°-90°	20.3	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°	433.1	27.5
0°-40°	733.8	46.5
0°-60°	1287.2	81.6
0°-90°	1577.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1577.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	513	513	513	513	513	
5°	507	515	511	514	519	48
15°	486	500	515	535	549	137
25°	445	469	512	562	587	205
35°	387	419	489	552	563	242
45°	318	351	422	425	415	245
55°	239	269	305	292	283	214
65°	159	177	193	181	175	157
75°	79	87	91	85	83	84
85°	15	16	16	16	15	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	512.7	512.7	512.7	512.7	512.7
2.5°	508.7	516.7	511.4	512.1	514.1
5°	506.7	515.4	511.4	514.1	518.7
7.5°	503.4	512.7	511.4	516.7	524.1
10°	498.7	509.4	512.7	522.1	530.1
12.5°	493.4	504.7	513.4	528.1	538.1
15°	486.1	500.1	514.7	535.4	548.7
17.5°	477.4	494.1	514.7	543.4	558.7
20°	467.4	486.7	514.7	550.1	568.7
22.5°	456.7	478.1	514.1	556.1	578.7
25°	444.7	468.7	512.1	562.1	587.4
27.5°	432.1	458.1	508.7	566.7	594.1
30°	418.1	446.1	504.1	568.7	596.1
32.5°	402.7	433.4	497.4	564.7	588.1
35°	387.4	418.7	488.7	552.1	563.4
37.5°	370.7	403.4	477.4	527.4	527.4
40°	353.4	386.7	463.4	493.4	491.4
42.5°	336.0	369.4	445.4	460.1	453.4
45°	318.0	351.4	422.1	425.4	415.4
47.5°	298.7	331.4	394.7	390.0	378.7
50°	279.4	311.4	364.0	356.0	344.7
52.5°	260.0	290.7	334.7	323.4	313.4
55°	239.4	268.7	304.7	292.0	282.7
57.5°	219.4	246.7	276.0	262.0	254.0
60°	199.4	224.0	247.4	234.0	226.7
62.5°	179.4	200.7	220.0	206.7	200.0
65°	159.4	177.4	192.7	180.7	174.7
67.5°	138.7	154.7	165.4	154.7	150.7
70°	118.7	131.3	139.4	130.0	126.7
72.5°	98.7	109.3	114.7	107.3	104.0
75°	79.3	87.3	91.3	84.7	82.7
77.5°	60.7	66.7	68.7	64.0	61.3
80°	44.0	47.3	48.7	45.3	44.0
82.5°	27.3	30.0	31.3	28.7	28.0
85°	14.7	16.0	16.0	16.0	15.3
87.5°	5.3	6.7	6.7	6.7	6.0
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	19.38	21.00	19.75	21.31	21.63	19.90	21.51	20.26	21.82	22.14
	3H	20.96	22.41	21.33	22.73	23.10	21.36	22.82	21.74	23.14	23.50
	4H	21.49	22.86	21.89	23.20	23.58	21.86	23.22	22.26	23.57	23.95
	6H	21.83	23.10	22.25	23.46	23.85	22.16	23.42	22.57	23.79	24.18
	8H	21.92	23.12	22.34	23.51	23.91	22.23	23.44	22.66	23.83	24.23
	12H	21.95	23.11	22.38	23.49	23.92	22.27	23.42	22.69	23.80	24.23
4H	2H	20.14	21.50	20.54	21.85	22.23	20.54	21.90	20.93	22.25	22.63
	3H	21.91	23.05	22.32	23.45	23.85	22.20	23.34	22.61	23.74	24.14
	4H	22.56	23.58	22.99	24.00	24.43	22.80	23.82	23.23	24.24	24.67
	6H	23.00	23.90	23.45	24.34	24.79	23.19	24.09	23.65	24.53	24.99
	8H	23.11	23.95	23.57	24.39	24.86	23.29	24.13	23.75	24.57	25.04
	12H	23.17	23.92	23.65	24.40	24.87	23.35	24.10	23.83	24.58	25.05
8H	4H	22.84	23.68	23.30	24.12	24.58	23.05	23.89	23.52	24.33	24.80
	6H	23.38	24.07	23.87	24.56	25.04	23.54	24.23	24.03	24.72	25.20
	8H	23.54	24.16	24.05	24.67	25.15	23.68	24.30	24.19	24.81	25.30
	12H	23.64	24.19	24.15	24.68	25.24	23.78	24.33	24.29	24.82	25.39
12H	4H	22.85	23.61	23.34	24.08	24.55	23.07	23.82	23.55	24.30	24.77
	6H	23.41	24.03	23.92	24.54	25.02	23.57	24.19	24.08	24.70	25.18
	8H	23.61	24.16	24.12	24.65	25.21	23.75	24.30	24.26	24.80	25.36