

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: P1439661

Luminaire Tested: S122DR-H865D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439661
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-H865D830-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

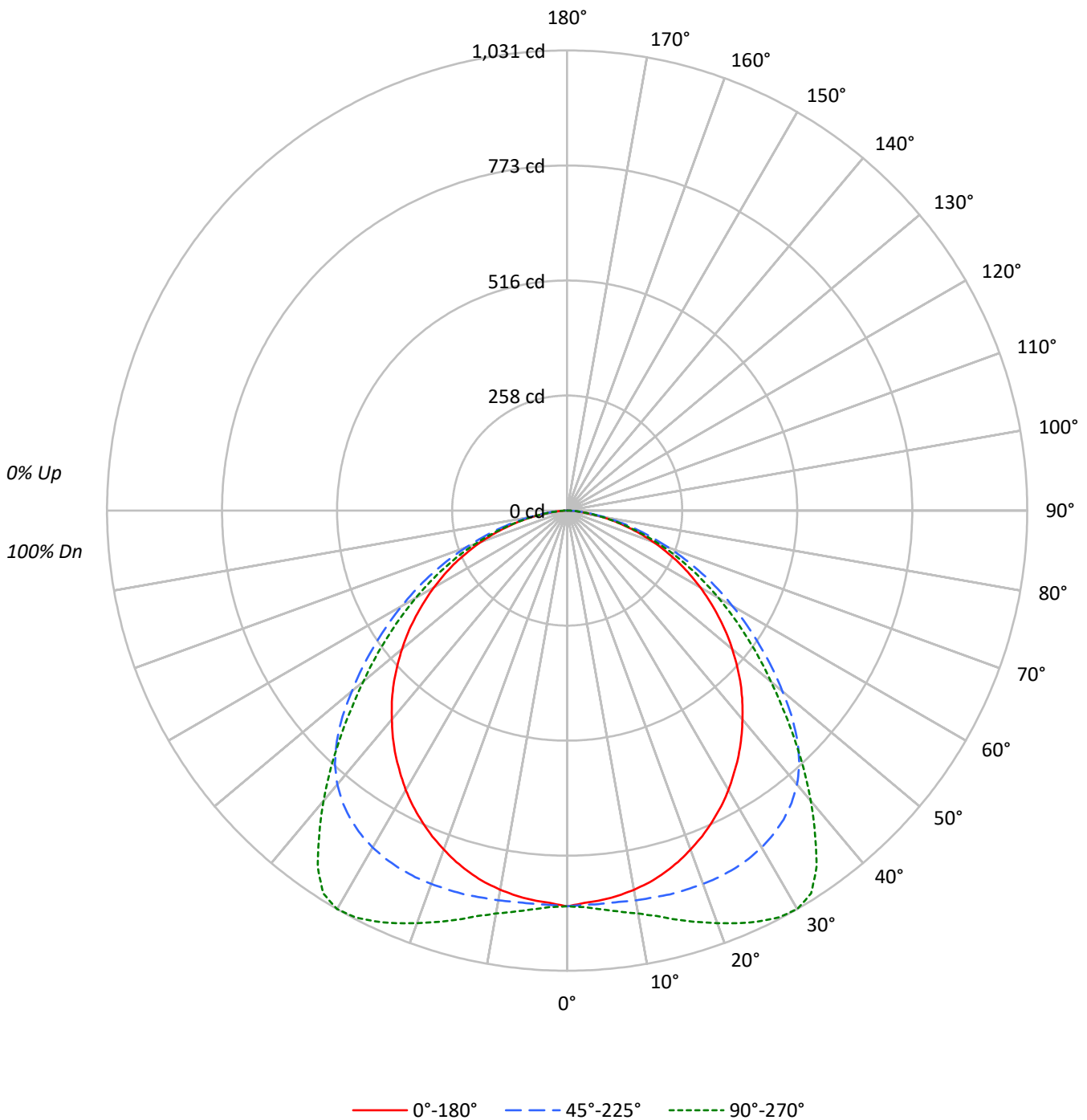
Lumens per Lamp: N/A
Luminaire Lumens: 2727.1 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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°	16799	16799	16799
5°	16666	16820	17061
10°	16593	17058	17636
15°	16488	17461	18614
20°	16297	17948	19831
25°	16078	18511	21235
30°	15817	19070	22551
35°	15494	19548	22534
40°	15114	19820	21017
45°	14736	19557	19248
50°	14239	18557	17570
55°	13672	17404	16149
60°	13065	16210	14854
65°	12355	14937	13543
70°	11367	13350	12137
75°	10043	11566	10468
80°	8303	9187	8303
85°	5521	6021	5761

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 19709 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	3.1
10°-20°	253.3	9.3
20°-30°	410.9	15.1
30°-40°	520.0	19.1
40°-50°	520.8	19.1
50°-60°	436.2	16.0
60°-70°	307.4	11.3
70°-80°	158.6	5.8
80°-90°	35.2	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°	749.0	27.5
0°-40°	1269.0	46.5
0°-60°	2226.0	81.6
0°-90°	2727.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2727.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	887	887	887	887	887	
5°	876	891	884	889	897	83
15°	841	865	890	926	949	237
25°	769	811	886	972	1016	354
35°	670	724	845	955	974	419
45°	550	608	730	736	718	424
55°	414	465	527	505	489	370
65°	276	307	333	312	302	272
75°	137	151	158	146	143	146
85°	25	28	28	28	26	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	886.7	886.7	886.7	886.7	886.7
2.5°	879.8	893.6	884.4	885.5	889.0
5°	876.3	891.3	884.4	889.0	897.1
7.5°	870.6	886.7	884.4	893.6	906.3
10°	862.5	880.9	886.7	902.8	916.7
12.5°	853.3	872.9	887.8	913.2	930.5
15°	840.6	864.8	890.2	925.9	949.0
17.5°	825.6	854.4	890.2	939.7	966.3
20°	808.3	841.7	890.2	951.3	983.6
22.5°	789.8	826.7	889.0	961.6	1000.8
25°	769.1	810.6	885.5	972.0	1015.8
27.5°	747.2	792.1	879.8	980.1	1027.4
30°	723.0	771.4	871.7	983.6	1030.8
32.5°	696.4	749.5	860.2	976.6	1017.0
35°	669.9	724.1	845.2	954.7	974.3
37.5°	641.1	697.6	825.6	912.1	912.1
40°	611.1	668.8	801.4	853.3	849.8
42.5°	581.1	638.8	770.2	795.6	784.1
45°	550.0	607.7	729.9	735.6	718.4
47.5°	516.6	573.1	682.6	674.5	654.9
50°	483.1	538.5	629.6	615.7	596.1
52.5°	449.7	502.7	578.8	559.2	541.9
55°	413.9	464.7	526.9	505.0	488.9
57.5°	379.4	426.6	477.4	453.1	439.3
60°	344.8	387.4	427.8	404.7	392.0
62.5°	310.2	347.1	380.5	357.4	345.9
65°	275.6	306.7	333.2	312.5	302.1
67.5°	239.8	267.5	286.0	267.5	260.6
70°	205.2	227.2	241.0	224.8	219.1
72.5°	170.7	189.1	198.3	185.6	179.9
75°	137.2	151.0	158.0	146.4	143.0
77.5°	104.9	115.3	118.8	110.7	106.1
80°	76.1	81.9	84.2	78.4	76.1
82.5°	47.3	51.9	54.2	49.6	48.4
85°	25.4	27.7	27.7	27.7	26.5
87.5°	9.2	11.5	11.5	11.5	10.4
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	21.29	22.90	21.65	23.21	23.53	21.80	23.41	22.16	23.73	24.04
	3H	22.86	24.31	23.23	24.64	25.00	23.27	24.72	23.64	25.05	25.41
	4H	23.39	24.76	23.79	25.11	25.48	23.76	25.13	24.16	25.47	25.85
	6H	23.74	25.00	24.15	25.37	25.76	24.06	25.33	24.47	25.69	26.08
	8H	23.82	25.03	24.24	25.42	25.81	24.13	25.34	24.56	25.73	26.13
	12H	23.86	25.01	24.29	25.39	25.82	24.17	25.32	24.60	25.71	26.13
4H	2H	22.04	23.41	22.44	23.76	24.13	22.44	23.80	22.84	24.15	24.53
	3H	23.81	24.95	24.22	25.35	25.75	24.11	25.25	24.52	25.64	26.04
	4H	24.46	25.49	24.89	25.90	26.34	24.70	25.73	25.13	26.14	26.58
	6H	24.90	25.80	25.36	26.24	26.70	25.10	25.99	25.55	26.43	26.89
	8H	25.01	25.85	25.47	26.29	26.76	25.20	26.03	25.66	26.48	26.94
	12H	25.07	25.82	25.55	26.30	26.77	25.26	26.01	25.74	26.48	26.95
8H	4H	24.74	25.58	25.20	26.02	26.49	24.96	25.79	25.42	26.24	26.70
	6H	25.28	25.98	25.78	26.46	26.94	25.44	26.14	25.94	26.62	27.10
	8H	25.44	26.06	25.95	26.57	27.06	25.59	26.21	26.10	26.72	27.20
	12H	25.54	26.10	26.05	26.59	27.15	25.69	26.24	26.19	26.73	27.29
12H	4H	24.76	25.51	25.24	25.99	26.45	24.97	25.72	25.45	26.20	26.67
	6H	25.31	25.93	25.82	26.44	26.93	25.47	26.09	25.98	26.60	27.09
	8H	25.52	26.07	26.02	26.56	27.12	25.66	26.21	26.16	26.70	27.26