

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: P1439652

Luminaire Tested: S122DR-H675D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439652
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-H675D830-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

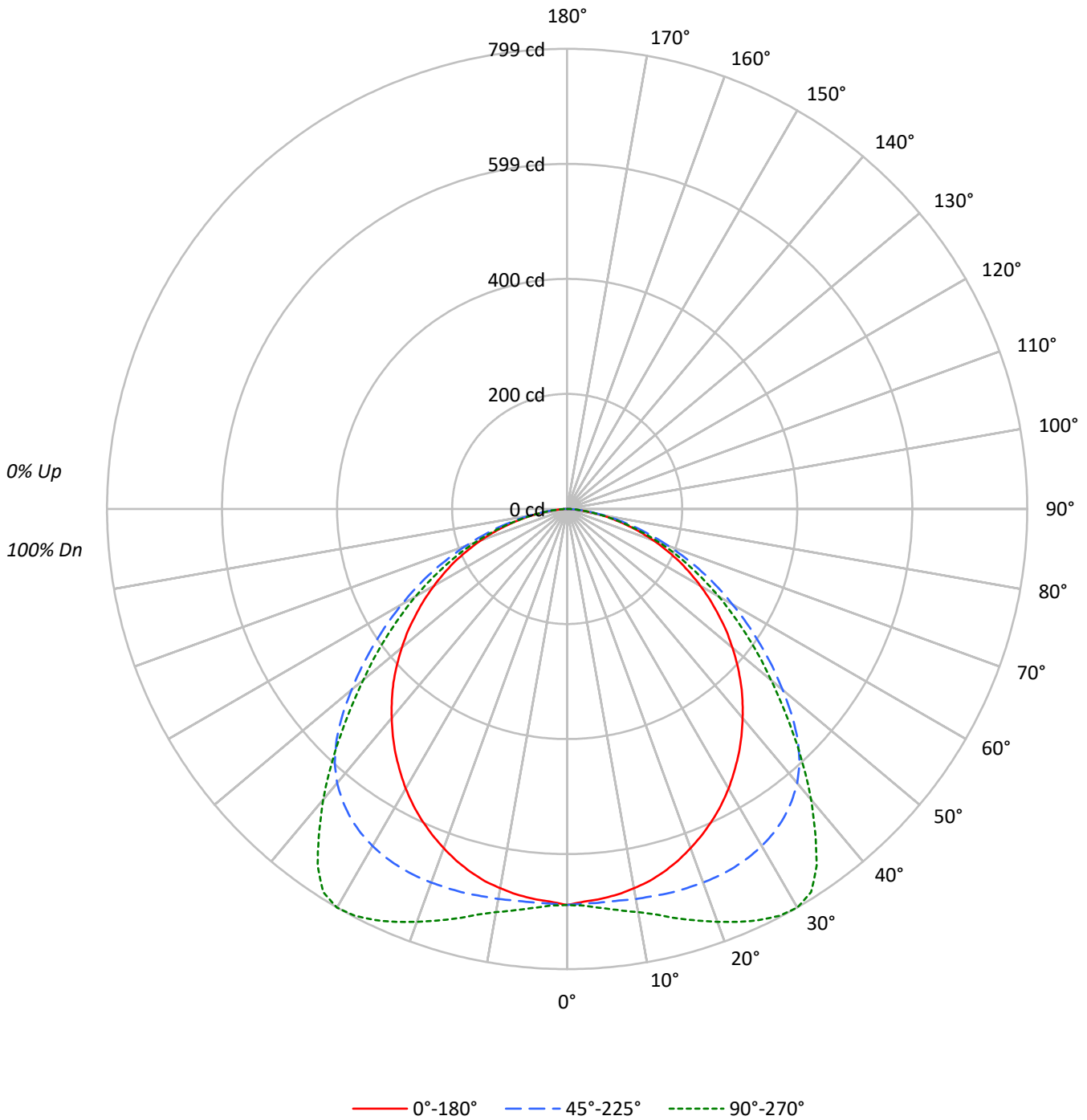
Lumens per Lamp: N/A
Luminaire Lumens: 2114.6 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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	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°	13027	13027	13027
5°	12923	13043	13229
10°	12866	13228	13674
15°	12785	13538	14432
20°	12637	13916	15377
25°	12467	14355	16466
30°	12264	14787	17486
35°	12015	15158	17474
40°	11721	15368	16296
45°	11427	15165	14924
50°	11041	14389	13623
55°	10603	13497	12522
60°	10128	12569	11519
65°	9580	11584	10504
70°	8813	10353	9411
75°	7789	8967	8118
80°	6437	7125	6437
85°	4282	4674	4478

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 15283 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	3.1
10°-20°	196.4	9.3
20°-30°	318.7	15.1
30°-40°	403.2	19.1
40°-50°	403.8	19.1
50°-60°	338.2	16.0
60°-70°	238.3	11.3
70°-80°	123.0	5.8
80°-90°	27.3	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°	580.8	27.5
0°-40°	984.0	46.5
0°-60°	1726.0	81.6
0°-90°	2114.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2114.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	688	688	688	688	688	
5°	680	691	686	689	696	65
15°	652	671	690	718	736	184
25°	596	628	687	754	788	275
35°	520	562	655	740	756	325
45°	426	471	566	570	557	328
55°	321	360	409	392	379	287
65°	214	238	258	242	234	211
75°	106	117	122	114	111	113
85°	20	22	22	22	21	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	687.6	687.6	687.6	687.6	687.6
2.5°	682.2	692.9	685.8	686.7	689.3
5°	679.5	691.1	685.8	689.3	695.6
7.5°	675.0	687.6	685.8	692.9	702.8
10°	668.8	683.1	687.6	700.1	710.8
12.5°	661.6	676.8	688.4	708.1	721.5
15°	651.8	670.6	690.2	718.0	735.8
17.5°	640.2	662.5	690.2	728.7	749.2
20°	626.8	652.7	690.2	737.6	762.7
22.5°	612.5	641.1	689.3	745.7	776.1
25°	596.4	628.5	686.7	753.7	787.7
27.5°	579.4	614.2	682.2	760.0	796.6
30°	560.6	598.1	675.9	762.7	799.3
32.5°	540.0	581.2	667.0	757.3	788.6
35°	519.5	561.5	655.4	740.3	755.5
37.5°	497.1	540.9	640.2	707.2	707.2
40°	473.9	518.6	621.4	661.6	658.9
42.5°	450.6	495.3	597.3	616.9	608.0
45°	426.5	471.2	566.0	570.4	557.0
47.5°	400.6	444.4	529.3	523.0	507.8
50°	374.6	417.5	488.2	477.4	462.2
52.5°	348.7	389.8	448.8	433.6	420.2
55°	321.0	360.3	408.6	391.6	379.1
57.5°	294.2	330.8	370.2	351.4	340.6
60°	267.3	300.4	331.7	313.8	304.0
62.5°	240.5	269.1	295.0	277.2	268.2
65°	213.7	237.8	258.4	242.3	234.3
67.5°	186.0	207.4	221.7	207.4	202.1
70°	159.1	176.1	186.9	174.3	169.9
72.5°	132.3	146.6	153.8	143.9	139.5
75°	106.4	117.1	122.5	113.5	110.9
77.5°	81.4	89.4	92.1	85.8	82.3
80°	59.0	63.5	65.3	60.8	59.0
82.5°	36.7	40.2	42.0	38.4	37.6
85°	19.7	21.5	21.5	21.5	20.6
87.5°	7.2	8.9	8.9	8.9	8.0
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	20.40	22.02	20.77	22.33	22.64	20.92	22.53	21.28	22.84	23.16
	3H	21.97	23.43	22.35	23.75	24.11	22.38	23.84	22.76	24.16	24.52
	4H	22.51	23.88	22.91	24.22	24.60	22.88	24.24	23.28	24.59	24.97
	6H	22.85	24.12	23.26	24.48	24.87	23.18	24.44	23.59	24.81	25.20
	8H	22.94	24.14	23.36	24.53	24.93	23.25	24.46	23.68	24.85	25.25
	12H	22.97	24.13	23.40	24.51	24.94	23.29	24.44	23.72	24.82	25.25
4H	2H	21.16	22.52	21.56	22.87	23.25	21.56	22.92	21.95	23.27	23.65
	3H	22.93	24.07	23.34	24.47	24.87	23.22	24.36	23.63	24.76	25.16
	4H	23.58	24.60	24.01	25.02	25.45	23.82	24.84	24.25	25.26	25.69
	6H	24.02	24.91	24.47	25.36	25.81	24.21	25.11	24.67	25.55	26.01
	8H	24.13	24.97	24.59	25.41	25.87	24.31	25.15	24.77	25.59	26.06
	12H	24.19	24.94	24.67	25.42	25.89	24.37	25.12	24.85	25.60	26.07
8H	4H	23.86	24.70	24.32	25.14	25.60	24.07	24.91	24.53	25.35	25.82
	6H	24.40	25.09	24.89	25.58	26.06	24.56	25.25	25.05	25.74	26.22
	8H	24.56	25.18	25.07	25.69	26.17	24.70	25.32	25.21	25.83	26.32
	12H	24.66	25.21	25.17	25.70	26.26	24.80	25.35	25.31	25.84	26.41
12H	4H	23.87	24.63	24.35	25.10	25.57	24.09	24.84	24.57	25.32	25.79
	6H	24.43	25.05	24.94	25.56	26.04	24.58	25.21	25.10	25.72	26.20
	8H	24.63	25.18	25.14	25.67	26.23	24.77	25.32	25.28	25.81	26.38