

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P475251

Luminaire Tested: **22CZ2-100VHE-SQR-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475251  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-100VHE-SQR-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9187.1 lumens  
Efficiency: N/A  
Efficacy: 121.2 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

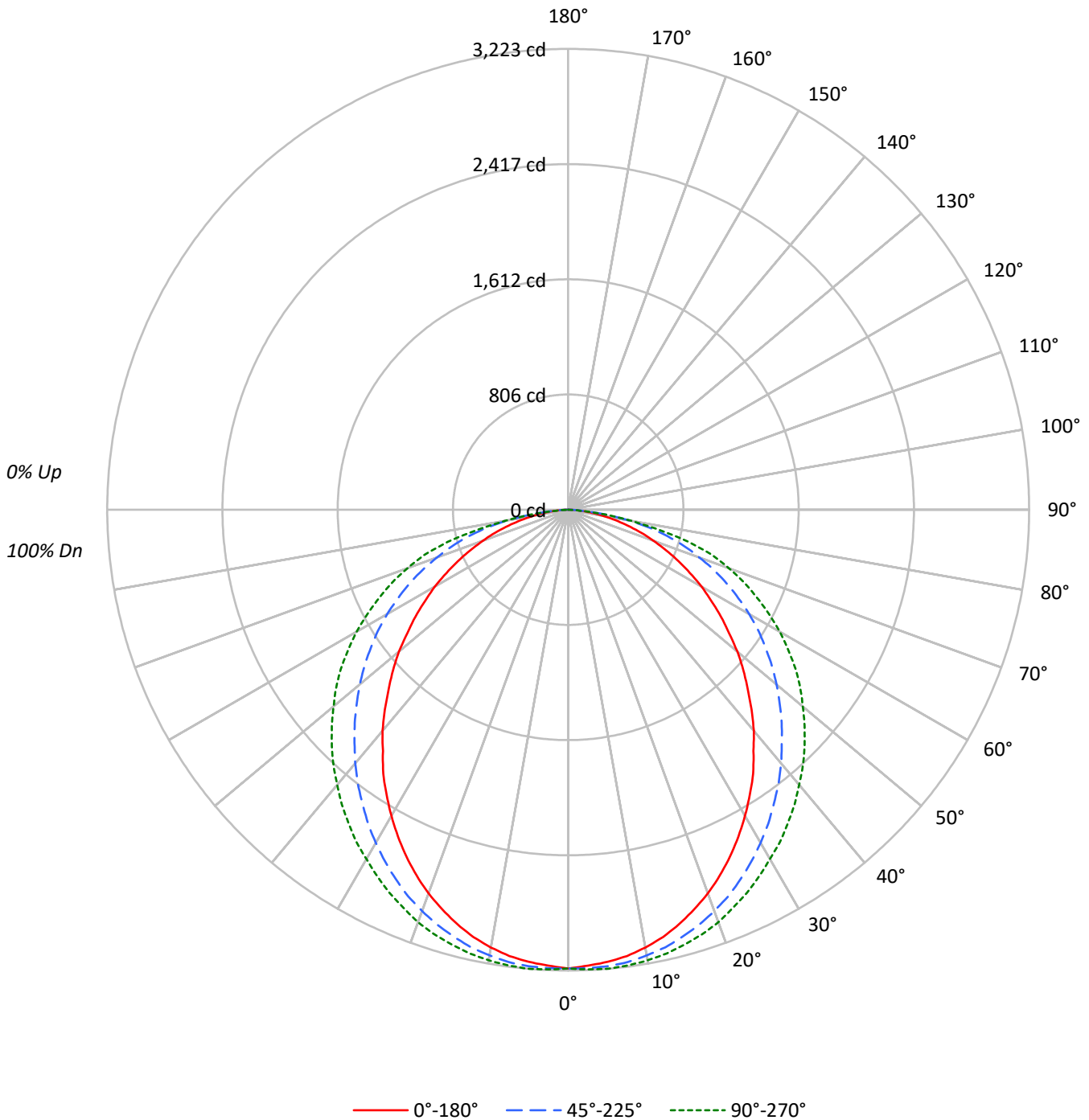
Input Watts (W): 75.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P475251

CATALOG NUMBER: 22CZ2-100VHE-SQR-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P475251

CATALOG NUMBER: 22CZ2-100VHE-SQR-UNV-L830-CD1-U

**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	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8636	8636	8636
5°	8575	8657	8705
10°	8496	8650	8745
15°	8358	8612	8771
20°	8178	8554	8790
25°	7950	8467	8778
30°	7682	8360	8766
35°	7405	8236	8795
40°	7092	8134	8824
45°	6753	8031	8894
50°	6462	7958	8962
55°	6116	7896	9104
60°	5796	7863	9200
65°	5414	7801	9272
70°	4973	7684	9400
75°	4489	7480	9065
80°	3851	6625	6826
85°	3100	3903	3100



TEST NUMBER: P475251

CATALOG NUMBER: 22CZ2-100VHE-SQR-UNV-L830-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	304.2	3.3
10°-20°	869.9	9.5
20°-30°	1306.5	14.2
30°-40°	1558.2	17.0
40°-50°	1611.0	17.5
50°-60°	1481.1	16.1
60°-70°	1179.1	12.8
70°-80°	720.4	7.8
80°-90°	156.5	1.7
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°	2480.7	27.0
0°-40°	4038.8	44.0
0°-60°	7131.0	77.6
0°-90°	9187.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9187.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3209	3209	3209	3209	3209	
5°	3174	3183	3205	3218	3223	301
15°	3000	3035	3091	3135	3148	845
25°	2677	2742	2852	2930	2956	1232
35°	2254	2350	2507	2638	2677	1406
45°	1775	1901	2110	2281	2337	1372
55°	1304	1448	1683	1875	1941	1166
65°	850	994	1225	1395	1456	842
75°	432	558	719	846	872	460
85°	100	122	126	109	100	116
90°	0	0	0	0	0	



TEST NUMBER: P475251

CATALOG NUMBER: 22CZ2-100VHE-SQR-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3209.1	3209.1	3209.1	3209.1	3209.1
2.5°	3191.7	3196.1	3209.1	3218.3	3218.3
5°	3174.4	3183.0	3204.7	3218.3	3222.6
7.5°	3148.3	3161.3	3191.7	3209.1	3213.9
10°	3109.2	3126.6	3165.7	3191.7	3200.4
12.5°	3061.0	3087.0	3135.3	3170.0	3178.7
15°	3000.2	3034.9	3091.4	3135.3	3148.3
17.5°	2930.2	2973.6	3043.6	3096.2	3113.6
20°	2855.9	2899.8	2987.1	3047.9	3069.6
22.5°	2769.1	2825.5	2925.9	2995.8	3013.2
25°	2677.4	2742.5	2851.6	2930.2	2956.3
27.5°	2577.0	2655.7	2773.4	2869.4	2891.1
30°	2472.3	2555.3	2690.4	2795.1	2821.2
32.5°	2363.3	2459.3	2603.1	2720.8	2756.0
35°	2254.2	2350.2	2507.1	2638.3	2677.4
37.5°	2127.8	2241.2	2415.9	2551.0	2598.7
40°	2018.8	2127.8	2315.5	2463.6	2511.9
42.5°	1896.7	2014.4	2210.8	2372.0	2428.9
45°	1774.6	1901.0	2110.4	2280.8	2337.2
47.5°	1661.2	1787.7	2005.7	2184.7	2241.2
50°	1543.5	1674.3	1901.0	2084.4	2140.8
52.5°	1417.1	1560.9	1796.3	1979.7	2045.3
55°	1303.7	1447.5	1683.0	1875.0	1940.6
57.5°	1186.0	1334.1	1578.7	1761.6	1822.9
60°	1076.9	1220.7	1461.0	1639.5	1709.5
62.5°	959.2	1107.3	1342.8	1517.5	1583.1
65°	850.2	994.4	1225.1	1395.4	1456.2
67.5°	741.1	885.4	1103.0	1264.6	1334.1
70°	632.1	776.3	976.6	1133.9	1194.7
72.5°	536.5	663.0	854.5	998.8	1055.2
75°	431.8	558.2	719.4	845.8	871.9
77.5°	335.8	449.2	584.3	640.8	649.9
80°	248.5	335.8	427.5	440.5	440.5
82.5°	165.5	231.1	265.9	270.2	265.9
85°	100.4	122.1	126.4	109.0	100.4
87.5°	34.7	34.7	21.7	13.0	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)