

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: P474789

Luminaire Tested: **22CZ2-110VHE-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474789  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-110VHE-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10633.9 lumens  
Efficiency: N/A  
Efficacy: 126.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

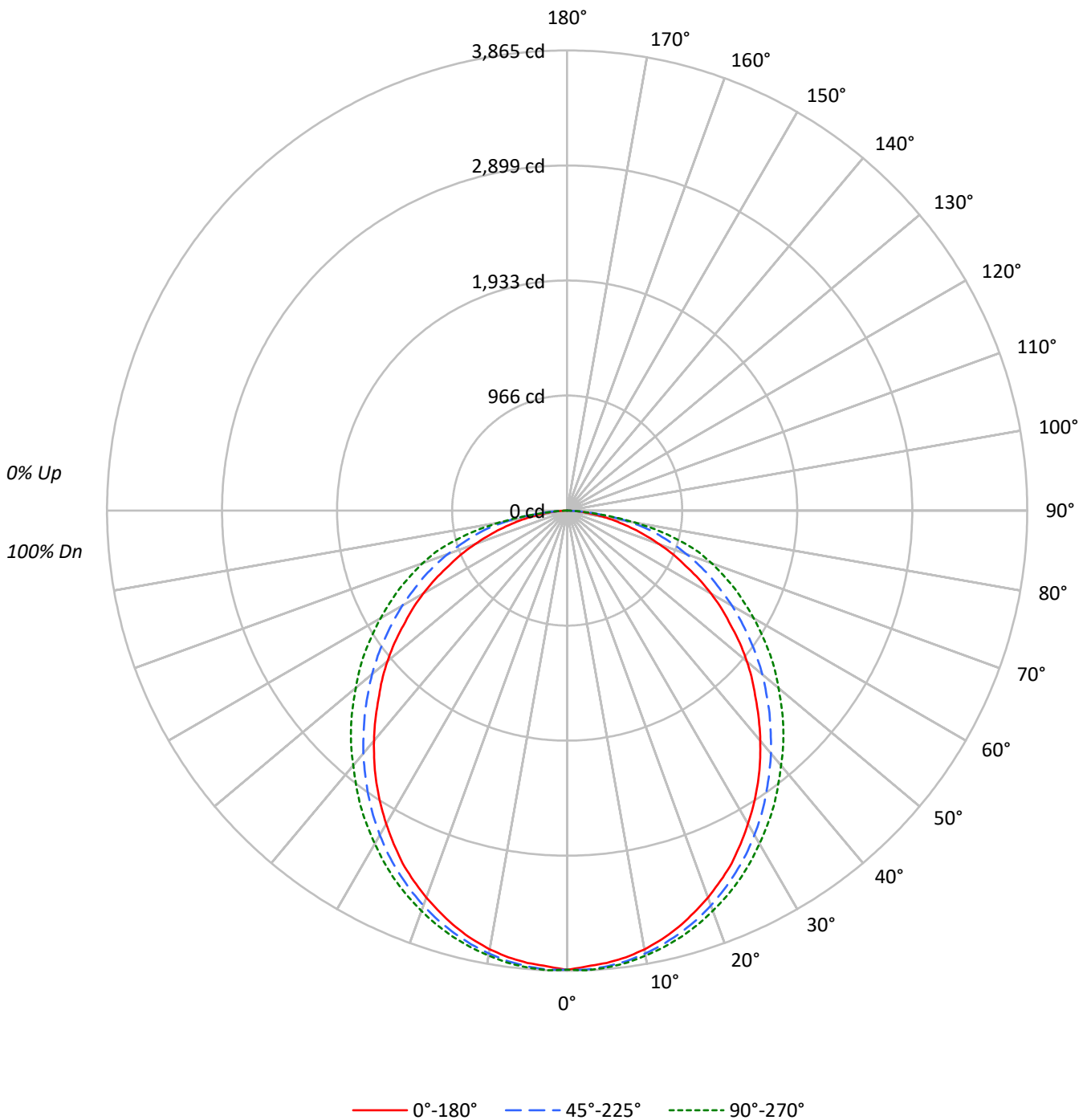
Input Watts (W): 84.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P474789

CATALOG NUMBER: 22CZ2-110VHE-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P474789

CATALOG NUMBER: 22CZ2-110VHE-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	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	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50					50			
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	56	50	45	43					43			
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38					38			
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33					33			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30					30			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27					27			
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24					24			

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

	0°	45°	90°
0°	10377	10377	10377
5°	10302	10381	10405
10°	10224	10323	10372
15°	10086	10230	10324
20°	9904	10110	10245
25°	9709	9956	10163
30°	9441	9776	10041
35°	9177	9568	9944
40°	8865	9355	9821
45°	8527	9143	9775
50°	8251	8956	9700
55°	7865	8762	9721
60°	7511	8612	9748
65°	6983	8500	9902
70°	6454	8381	10150
75°	5771	8342	10211
80°	4841	7905	8915
85°	3748	5412	5067



TEST NUMBER: P474789

CATALOG NUMBER: 22CZ2-110VHE-UNV-L830-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	364.3	3.4
10°-20°	1034.3	9.7
20°-30°	1542.2	14.5
30°-40°	1820.5	17.1
40°-50°	1855.4	17.4
50°-60°	1673.3	15.7
60°-70°	1315.2	12.4
70°-80°	823.4	7.7
80°-90°	205.3	1.9
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°	2940.8	27.7
0°-40°	4761.3	44.8
0°-60°	8290.0	78.0
0°-90°	10633.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10633.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3856	3856	3856	3856	3856	
5°	3814	3823	3843	3852	3852	362
15°	3620	3636	3672	3699	3706	1020
25°	3270	3295	3353	3405	3423	1503
35°	2793	2829	2912	2993	3027	1746
45°	2241	2290	2402	2519	2569	1733
55°	1676	1728	1868	2011	2072	1505
65°	1097	1164	1335	1483	1555	1093
75°	555	638	802	946	982	589
85°	121	155	175	175	164	146
90°	0	0	0	0	0	



TEST NUMBER: P474789

CATALOG NUMBER: 22CZ2-110VHE-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3856.4	3856.4	3856.4	3856.4	3856.4
2.5°	3831.7	3840.7	3858.6	3865.4	3865.4
5°	3813.7	3822.7	3842.9	3851.9	3851.9
7.5°	3784.5	3793.5	3818.2	3829.4	3831.7
10°	3741.8	3753.0	3777.7	3795.7	3795.7
12.5°	3687.8	3699.1	3730.5	3753.0	3755.3
15°	3620.4	3636.2	3672.1	3699.1	3705.8
17.5°	3541.8	3566.5	3606.9	3640.7	3647.4
20°	3458.6	3483.3	3530.5	3568.7	3577.7
22.5°	3366.5	3389.0	3445.1	3492.3	3503.6
25°	3269.8	3294.6	3353.0	3404.7	3422.7
27.5°	3155.2	3184.4	3254.1	3312.5	3330.5
30°	3038.4	3074.3	3146.2	3211.4	3231.6
32.5°	2919.3	2953.0	3033.9	3103.5	3130.5
35°	2793.4	2829.4	2912.5	2993.4	3027.1
37.5°	2660.8	2696.8	2786.7	2878.8	2910.3
40°	2523.7	2566.4	2663.1	2762.0	2795.7
42.5°	2384.4	2429.3	2530.5	2640.6	2685.5
45°	2240.6	2290.0	2402.4	2519.2	2568.7
47.5°	2110.2	2150.7	2267.5	2395.6	2442.8
50°	1970.9	2009.1	2139.4	2267.5	2317.0
52.5°	1829.3	1865.3	2004.6	2139.4	2200.1
55°	1676.5	1728.2	1867.5	2011.3	2072.0
57.5°	1541.7	1588.9	1732.7	1878.8	1937.2
60°	1395.6	1445.0	1600.1	1748.4	1811.3
62.5°	1249.5	1303.4	1460.8	1620.3	1678.7
65°	1096.7	1164.1	1334.9	1483.2	1555.1
67.5°	966.3	1031.5	1200.1	1355.1	1418.1
70°	820.3	896.7	1065.2	1222.5	1290.0
72.5°	683.2	759.6	932.6	1089.9	1157.4
75°	555.1	638.2	802.3	946.1	982.1
77.5°	431.5	510.1	674.2	757.3	795.5
80°	312.4	388.8	510.1	566.3	575.3
82.5°	211.2	276.4	346.1	361.8	352.8
85°	121.4	155.1	175.3	175.3	164.1
87.5°	49.4	49.4	42.7	27.0	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)