

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: P475253

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

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475253
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-110VHE-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: 10102.9 lumens
Efficiency: N/A
Efficacy: 120.1 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

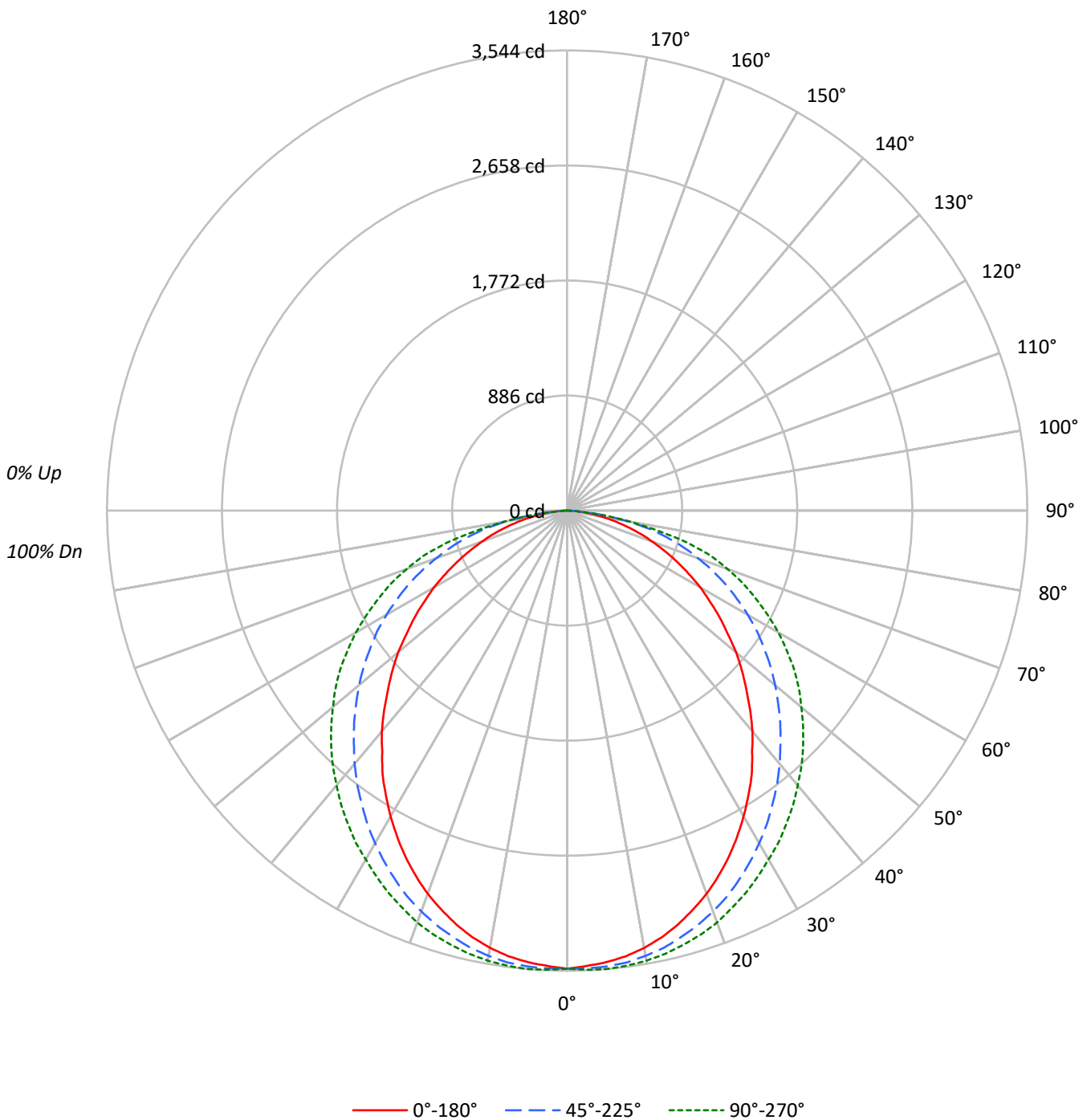
Input Watts (W): 84.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9496	9496	9496
5°	9430	9520	9573
10°	9343	9513	9617
15°	9192	9471	9645
20°	8994	9407	9667
25°	8742	9311	9653
30°	8448	9193	9640
35°	8144	9057	9672
40°	7798	8945	9703
45°	7427	8832	9781
50°	7106	8752	9856
55°	6726	8683	10012
60°	6374	8647	10118
65°	5953	8578	10196
70°	5469	8449	10337
75°	4938	8225	9969
80°	4235	7285	7507
85°	3409	4292	3409



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.6	3.3
10°-20°	956.6	9.5
20°-30°	1436.8	14.2
30°-40°	1713.5	17.0
40°-50°	1771.6	17.5
50°-60°	1628.8	16.1
60°-70°	1296.7	12.8
70°-80°	792.2	7.8
80°-90°	172.2	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°	2727.9	27.0
0°-40°	4441.5	44.0
0°-60°	7841.9	77.6
0°-90°	10102.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10102.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3529	3529	3529	3529	3529	
5°	3491	3500	3524	3539	3544	331
15°	3299	3338	3400	3448	3462	929
25°	2944	3016	3136	3222	3251	1354
35°	2479	2584	2757	2901	2944	1547
45°	1952	2091	2321	2508	2570	1509
55°	1434	1592	1851	2062	2134	1282
65°	935	1094	1347	1534	1601	926
75°	475	614	791	930	959	506
85°	110	134	139	120	110	127
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3529.0	3529.0	3529.0	3529.0	3529.0
2.5°	3509.9	3514.7	3529.0	3539.1	3539.1
5°	3490.8	3500.4	3524.2	3539.1	3543.9
7.5°	3462.2	3476.5	3509.9	3529.0	3534.3
10°	3419.2	3438.3	3481.3	3509.9	3519.5
12.5°	3366.1	3394.8	3447.8	3486.0	3495.6
15°	3299.3	3337.5	3399.5	3447.8	3462.2
17.5°	3222.3	3270.1	3347.0	3404.8	3423.9
20°	3140.6	3188.9	3284.9	3351.8	3375.7
22.5°	3045.1	3107.2	3217.5	3294.5	3313.6
25°	2944.3	3015.9	3135.8	3222.3	3251.0
27.5°	2833.9	2920.4	3049.9	3155.5	3179.3
30°	2718.8	2810.0	2958.6	3073.8	3102.4
32.5°	2598.9	2704.5	2862.6	2992.0	3030.8
35°	2479.0	2584.5	2757.0	2901.3	2944.3
37.5°	2339.9	2464.6	2656.7	2805.3	2857.8
40°	2220.0	2339.9	2546.3	2709.2	2762.3
42.5°	2085.8	2215.2	2431.2	2608.4	2671.0
45°	1951.5	2090.6	2320.8	2508.1	2570.2
47.5°	1826.8	1965.9	2205.7	2402.5	2464.6
50°	1697.4	1841.2	2090.6	2292.2	2354.3
52.5°	1558.4	1716.5	1975.4	2177.0	2249.2
55°	1433.7	1591.8	1850.7	2061.9	2134.1
57.5°	1304.2	1467.1	1736.1	1937.2	2004.6
60°	1184.3	1342.4	1606.7	1803.0	1879.9
62.5°	1054.8	1217.7	1476.7	1668.7	1740.9
65°	934.9	1093.6	1347.2	1534.5	1601.3
67.5°	815.0	973.6	1212.9	1390.7	1467.1
70°	695.1	853.7	1073.9	1246.9	1313.8
72.5°	590.0	729.0	939.7	1098.3	1160.4
75°	474.9	613.9	791.1	930.1	958.8
77.5°	369.3	494.0	642.6	704.6	714.7
80°	273.3	369.3	470.1	484.4	484.4
82.5°	182.0	254.2	292.4	297.1	292.4
85°	110.4	134.2	139.0	119.9	110.4
87.5°	38.2	38.2	23.9	14.3	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)