

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: P388174

Luminaire Tested: **22CZ2-110VHE-UNV-L930-CD2-SWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P388174
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-110VHE-UNV-L930-CD2-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9016.2 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

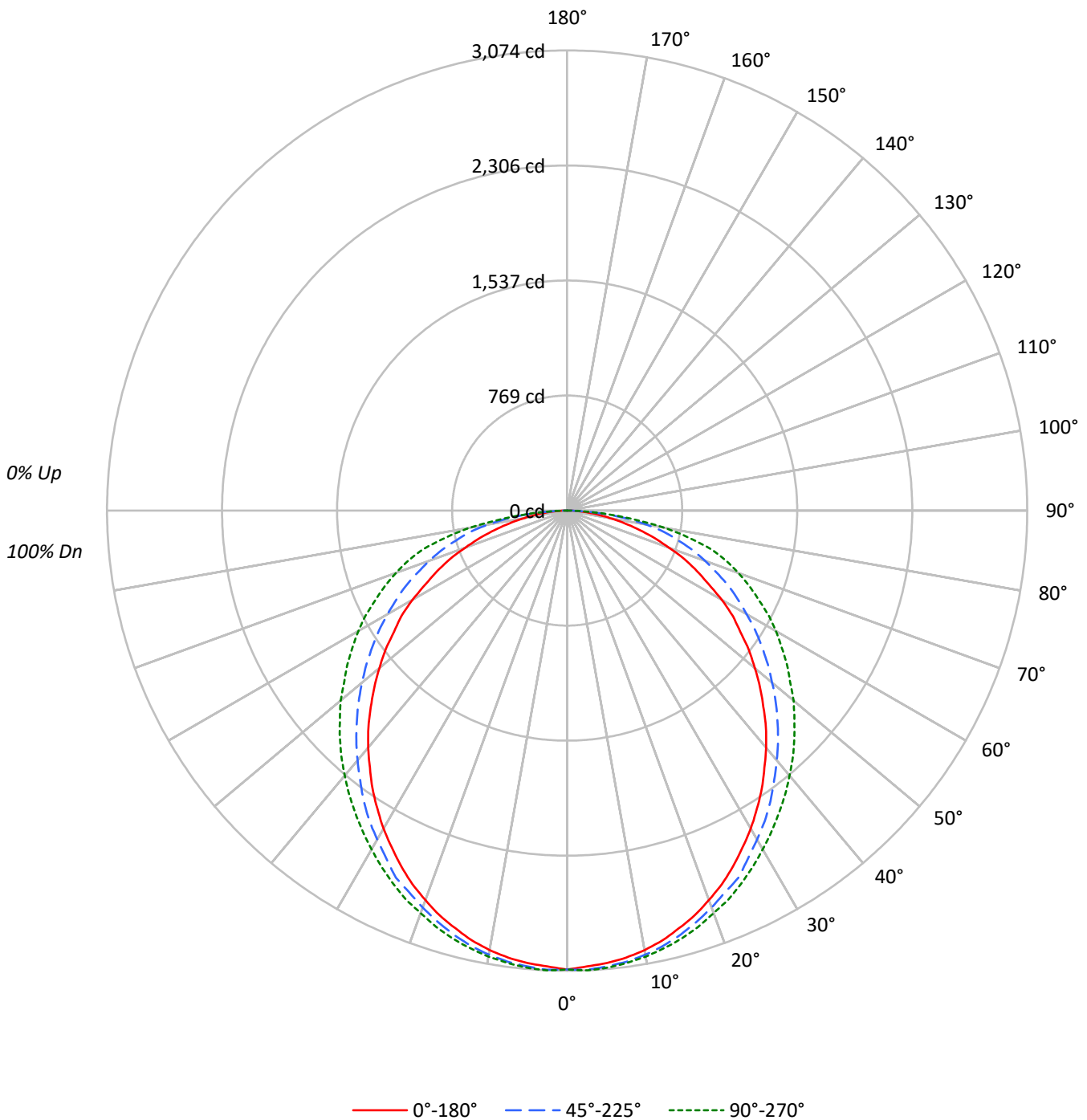
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8250	8250	8250
5°	8197	8257	8281
10°	8147	8231	8268
15°	8046	8170	8244
20°	7928	8080	8195
25°	7785	8035	8167
30°	7623	7885	8120
35°	7448	7783	8103
40°	7262	7652	8120
45°	7058	7564	8172
50°	6854	7485	8265
55°	6619	7452	8409
60°	6423	7450	8668
65°	6102	7571	8983
70°	5690	7714	9564
75°	5212	7980	10333
80°	4537	8319	10175
85°	3974	7398	8083



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.9	3.2
10°-20°	825.8	9.2
20°-30°	1239.7	13.7
30°-40°	1481.3	16.4
40°-50°	1540.4	17.1
50°-60°	1427.7	15.8
60°-70°	1171.0	13.0
70°-80°	791.6	8.8
80°-90°	248.8	2.8
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°	2355.4	26.1
0°-40°	3836.7	42.6
0°-60°	6804.8	75.5
0°-90°	9016.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9016.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3066	3066	3066	3066	3066	
5°	3035	3039	3057	3061	3066	288
15°	2888	2902	2933	2950	2959	815
25°	2622	2644	2706	2737	2751	1208
35°	2267	2298	2369	2440	2467	1417
45°	1854	1890	1988	2103	2147	1432
55°	1411	1455	1588	1730	1792	1268
65°	958	1012	1189	1344	1411	947
75°	501	586	768	923	994	532
85°	129	178	240	266	262	146
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3065.7	3065.7	3065.7	3065.7	3065.7
2.5°	3047.9	3056.8	3070.1	3074.5	3074.5
5°	3034.6	3039.1	3056.8	3061.2	3065.7
7.5°	3012.4	3021.3	3039.1	3043.5	3047.9
10°	2981.4	2990.3	3012.4	3021.3	3025.7
12.5°	2941.4	2950.3	2976.9	2990.3	2994.7
15°	2888.2	2901.5	2932.6	2950.3	2959.2
17.5°	2835.0	2848.3	2879.3	2906.0	2914.8
20°	2768.4	2799.5	2821.7	2857.2	2861.6
22.5°	2701.9	2719.6	2759.6	2795.0	2812.8
25°	2622.0	2644.2	2706.3	2737.4	2750.7
27.5°	2537.7	2568.8	2617.6	2666.4	2684.1
30°	2453.4	2475.6	2537.7	2595.4	2613.1
32.5°	2360.3	2391.3	2457.9	2515.5	2542.2
35°	2267.1	2298.1	2369.1	2440.1	2466.7
37.5°	2165.0	2200.5	2271.5	2355.8	2391.3
40°	2067.4	2094.1	2178.4	2280.4	2311.5
42.5°	1965.4	1996.5	2085.2	2196.1	2231.6
45°	1854.5	1890.0	1987.6	2102.9	2147.3
47.5°	1748.0	1783.5	1890.0	2005.3	2058.6
50°	1637.1	1681.5	1787.9	1921.0	1974.3
52.5°	1530.6	1570.5	1690.3	1827.9	1876.7
55°	1410.8	1455.2	1588.3	1730.3	1792.4
57.5°	1313.2	1344.3	1490.7	1637.1	1699.2
60°	1193.4	1233.4	1384.2	1539.5	1610.5
62.5°	1064.8	1131.3	1286.6	1446.3	1517.3
65°	958.3	1011.5	1189.0	1344.3	1410.8
67.5°	847.4	905.1	1078.1	1242.2	1317.7
70°	723.2	798.6	980.5	1144.6	1215.6
72.5°	612.2	692.1	878.4	1038.2	1113.6
75°	501.3	585.6	767.5	922.8	993.8
77.5°	394.9	488.0	665.5	785.3	829.6
80°	292.8	381.5	536.8	621.1	656.6
82.5°	204.1	279.5	394.9	439.2	448.1
85°	128.7	177.5	239.6	266.2	261.8
87.5°	57.7	71.0	88.7	97.6	93.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)