

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: P389115

Luminaire Tested: **22CZ2-110VHE-S-UNV-L940-CD2-SDWPD1-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: P389115
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-110VHE-S-UNV-L940-CD2-SDWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9690.1 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

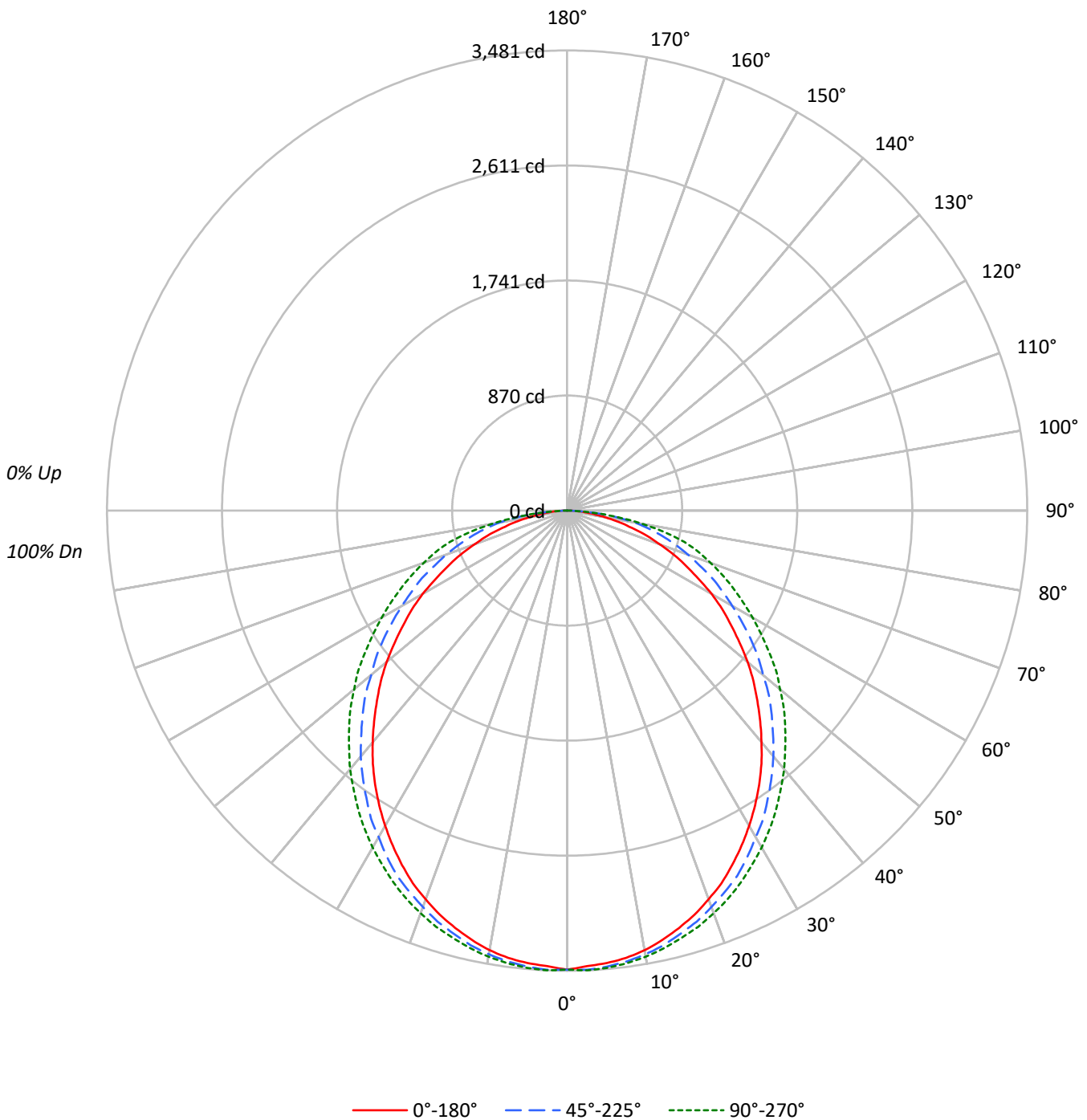
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	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	69	60	54	66	59	53	64	57	52	61	56	52	49					49			
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43					43			
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37					37			
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33					33			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30					30			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27					27			
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9344	9344	9344
5°	9282	9355	9380
10°	9228	9315	9365
15°	9107	9232	9321
20°	8960	9141	9283
25°	8780	9048	9222
30°	8556	8865	9146
35°	8317	8703	9060
40°	8036	8529	8974
45°	7743	8328	8878
50°	7457	8101	8801
55°	7106	7954	8739
60°	6789	7762	8711
65°	6334	7715	8809
70°	5834	7648	9071
75°	5265	7756	9542
80°	4554	7987	8968
85°	3770	6700	6700



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.4	3.4
10°-20°	934.5	9.6
20°-30°	1398.2	14.4
30°-40°	1655.8	17.1
40°-50°	1687.5	17.4
50°-60°	1512.5	15.6
60°-70°	1184.1	12.2
70°-80°	763.6	7.9
80°-90°	225.6	2.3
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°	2661.0	27.5
0°-40°	4316.9	44.5
0°-60°	7516.8	77.6
0°-90°	9690.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9690.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3472	3472	3472	3472	3472	
5°	3436	3445	3463	3468	3472	326
15°	3269	3287	3314	3341	3346	922
25°	2957	2984	3047	3088	3106	1361
35°	2532	2564	2649	2731	2758	1582
45°	2034	2080	2188	2301	2333	1571
55°	1515	1564	1695	1813	1863	1358
65°	995	1053	1212	1329	1384	988
75°	506	583	746	873	918	543
85°	122	167	217	217	217	143
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3472.3	3472.3	3472.3	3472.3	3472.3
2.5°	3449.7	3458.7	3476.8	3481.3	3481.3
5°	3436.1	3445.1	3463.2	3467.7	3472.3
7.5°	3413.5	3418.0	3440.6	3449.7	3454.2
10°	3377.3	3386.4	3409.0	3422.5	3427.1
12.5°	3327.6	3341.2	3368.3	3386.4	3390.9
15°	3268.8	3286.9	3314.0	3341.2	3345.7
17.5°	3205.5	3223.6	3259.8	3291.4	3300.5
20°	3128.7	3151.3	3192.0	3228.1	3241.7
22.5°	3051.8	3069.9	3119.6	3164.8	3178.4
25°	2956.9	2984.0	3047.3	3088.0	3106.0
27.5°	2857.4	2889.0	2952.3	3006.6	3024.7
30°	2753.4	2785.0	2852.9	2920.7	2943.3
32.5°	2644.9	2681.1	2762.4	2830.3	2852.9
35°	2531.9	2563.5	2649.4	2730.8	2757.9
37.5°	2414.3	2441.4	2540.9	2626.8	2653.9
40°	2287.7	2323.9	2427.9	2527.3	2554.5
42.5°	2161.1	2201.8	2305.8	2414.3	2441.4
45°	2034.5	2079.7	2188.3	2301.3	2332.9
47.5°	1912.5	1948.6	2070.7	2179.2	2224.4
50°	1781.3	1817.5	1935.1	2057.1	2102.3
52.5°	1645.7	1695.4	1822.0	1939.6	1993.8
55°	1514.6	1564.3	1695.4	1813.0	1862.7
57.5°	1392.5	1433.2	1568.8	1690.9	1740.7
60°	1261.4	1297.6	1442.3	1573.4	1618.6
62.5°	1121.3	1175.5	1324.7	1446.8	1501.0
65°	994.7	1053.4	1211.7	1329.2	1383.5
67.5°	877.1	931.4	1085.1	1211.7	1270.5
70°	741.5	813.8	972.1	1098.6	1152.9
72.5°	633.0	696.3	859.0	985.6	1044.4
75°	506.4	583.2	746.0	872.6	917.8
77.5°	402.4	479.2	633.0	732.4	755.0
80°	293.9	370.7	515.4	565.1	578.7
82.5°	198.9	271.3	370.7	384.3	388.8
85°	122.1	167.3	217.0	217.0	217.0
87.5°	58.8	67.8	76.9	72.3	72.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)