

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: P390070

Luminaire Tested: **22CZ2-110VHE-HRP-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: P390070
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-110VHE-HRP-UNV-L930-CD2-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7653.2 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

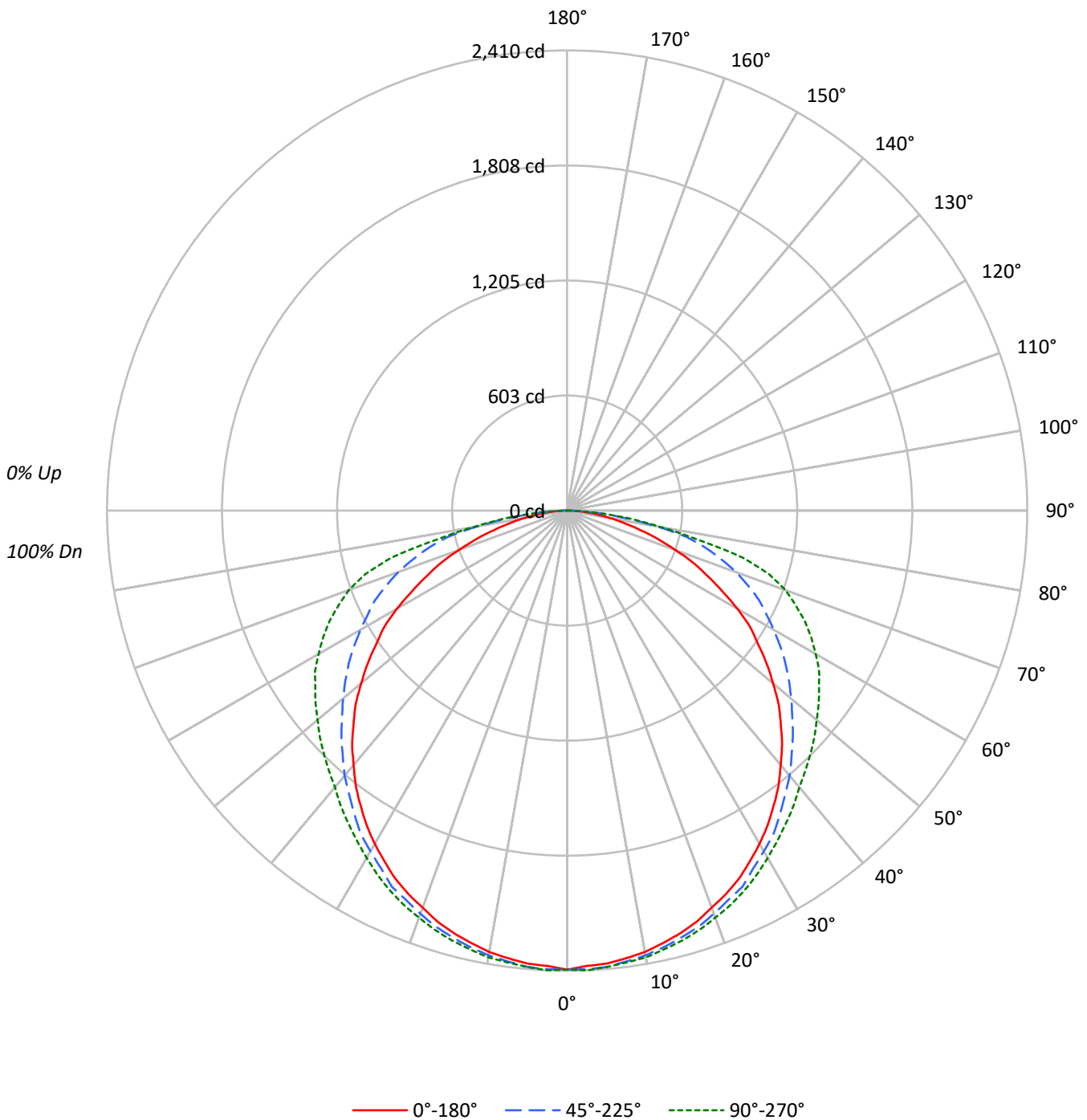
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6469	6469	6469
5°	6433	6479	6479
10°	6415	6461	6492
15°	6384	6446	6493
20°	6336	6433	6497
25°	6319	6453	6519
30°	6263	6403	6525
35°	6196	6381	6566
40°	6111	6368	6645
45°	6020	6363	6856
50°	5892	6411	7142
55°	5732	6550	7554
60°	5545	6727	8090
65°	5162	7062	8747
70°	4740	7397	9568
75°	4156	7785	9893
80°	3577	7415	7765
85°	3128	5388	5910



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.4	3.0
10°-20°	652.9	8.5
20°-30°	996.1	13.0
30°-40°	1216.3	15.9
40°-50°	1300.5	17.0
50°-60°	1255.3	16.4
60°-70°	1080.6	14.1
70°-80°	731.1	9.6
80°-90°	192.9	2.5
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°	1876.5	24.5
0°-40°	3092.8	40.4
0°-60°	5648.6	73.8
0°-90°	7653.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7653.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2404	2404	2404	2404	2404	
5°	2382	2387	2398	2398	2398	226
15°	2291	2297	2314	2325	2331	646
25°	2128	2139	2173	2184	2196	979
35°	1886	1903	1942	1982	1999	1180
45°	1582	1610	1672	1757	1802	1221
55°	1222	1261	1396	1537	1610	1095
65°	811	890	1109	1284	1374	806
75°	400	529	749	901	952	429
85°	101	141	174	180	191	114
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2404.0	2404.0	2404.0	2404.0	2404.0
2.5°	2387.1	2392.7	2404.0	2404.0	2409.6
5°	2381.5	2387.1	2398.4	2398.4	2398.4
7.5°	2364.6	2370.2	2381.5	2387.1	2387.1
10°	2347.7	2353.3	2364.6	2370.2	2375.9
12.5°	2319.6	2325.2	2342.1	2353.3	2353.3
15°	2291.4	2297.0	2313.9	2325.2	2330.8
17.5°	2257.6	2268.9	2285.8	2297.0	2302.7
20°	2212.6	2223.8	2246.4	2263.3	2268.9
22.5°	2173.2	2184.4	2207.0	2223.8	2235.1
25°	2128.1	2139.4	2173.2	2184.4	2195.7
27.5°	2071.8	2083.1	2111.2	2133.8	2150.7
30°	2015.5	2026.8	2060.6	2088.7	2100.0
32.5°	1953.6	1970.5	2009.9	2032.4	2049.3
35°	1886.0	1902.9	1942.3	1981.8	1998.6
37.5°	1818.5	1835.4	1874.8	1925.5	1948.0
40°	1739.7	1762.2	1812.9	1880.4	1891.7
42.5°	1666.5	1694.6	1739.7	1818.5	1846.6
45°	1582.0	1610.2	1672.1	1756.6	1801.6
47.5°	1503.2	1531.4	1598.9	1700.3	1756.6
50°	1407.5	1446.9	1531.4	1649.6	1705.9
52.5°	1317.4	1351.2	1463.8	1593.3	1660.8
55°	1221.7	1261.1	1396.2	1537.0	1610.2
57.5°	1137.3	1171.0	1323.0	1480.7	1565.1
60°	1030.3	1075.3	1249.9	1418.8	1503.2
62.5°	917.7	985.2	1176.7	1351.2	1441.3
65°	810.7	889.5	1109.1	1283.6	1373.7
67.5°	715.0	799.5	1024.7	1210.4	1294.9
70°	602.4	709.4	940.2	1120.4	1216.1
72.5°	501.1	619.3	844.5	1024.7	1109.1
75°	399.7	529.2	748.8	900.8	951.5
77.5°	309.6	433.5	641.8	686.9	692.5
80°	230.8	343.4	478.5	484.2	501.1
82.5°	157.6	242.1	309.6	337.8	343.4
85°	101.3	140.7	174.5	180.2	191.4
87.5°	45.0	50.7	61.9	56.3	56.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)