

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: P390069

Luminaire Tested: **22CZ2-110VHE-HRP-UNV-L930-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: P390069
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-SDWPD1-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: 7560.9 lumens
Efficiency: N/A
Efficacy: 86.2 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

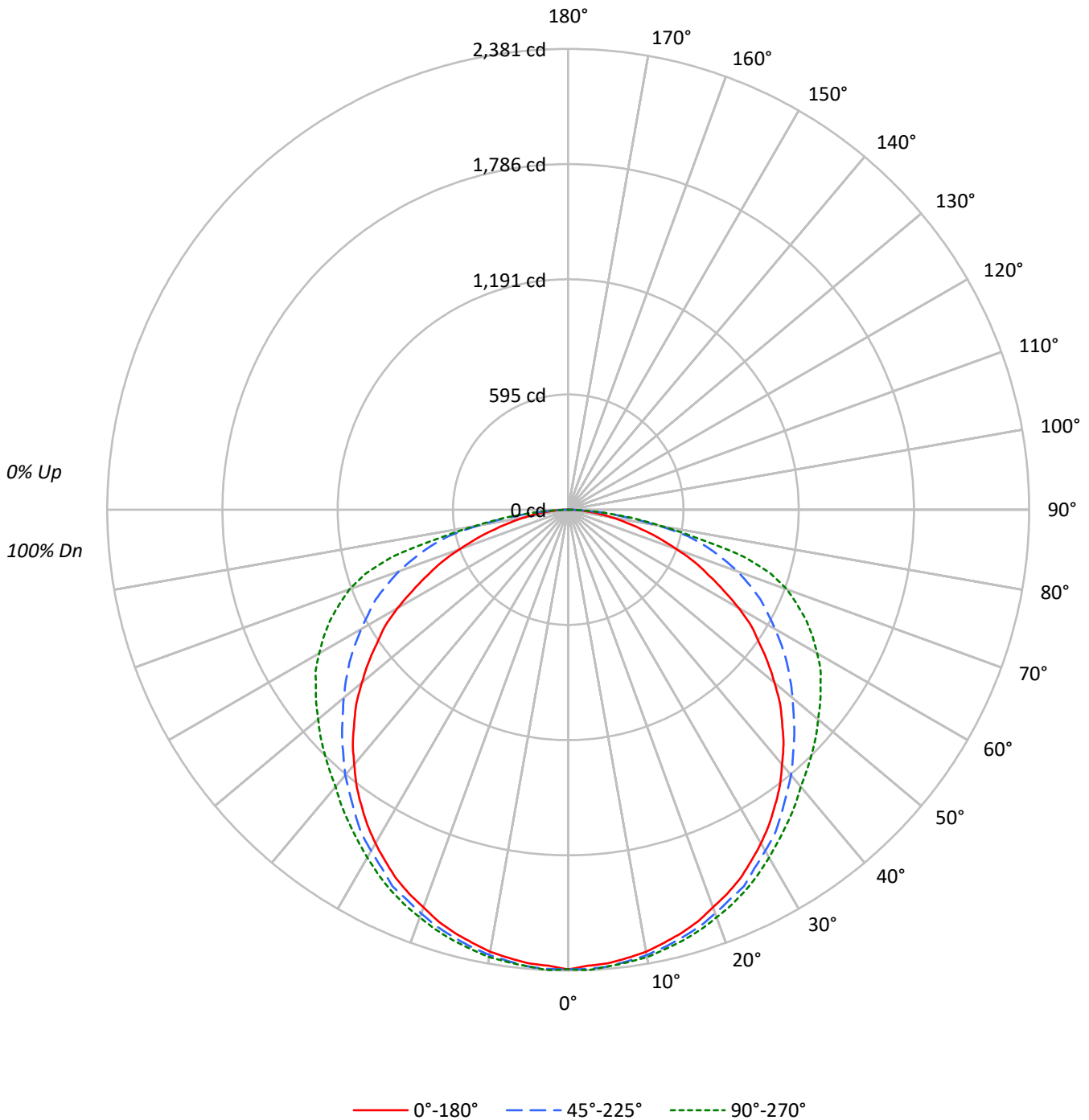
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6391	6391	6391
5°	6356	6400	6400
10°	6338	6383	6414
15°	6307	6369	6415
20°	6260	6355	6419
25°	6243	6375	6441
30°	6187	6325	6447
35°	6121	6304	6486
40°	6037	6291	6565
45°	5948	6287	6774
50°	5821	6334	7055
55°	5663	6472	7463
60°	5478	6646	7993
65°	5100	6977	8641
70°	4682	7308	9452
75°	4106	7692	9773
80°	3533	7327	7671
85°	3091	5323	5839



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.7	3.0
10°-20°	645.0	8.5
20°-30°	984.1	13.0
30°-40°	1201.6	15.9
40°-50°	1284.8	17.0
50°-60°	1240.1	16.4
60°-70°	1067.6	14.1
70°-80°	722.3	9.6
80°-90°	190.6	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°	1853.8	24.5
0°-40°	3055.5	40.4
0°-60°	5580.5	73.8
0°-90°	7560.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7560.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2375	2375	2375	2375	2375	
5°	2353	2358	2369	2369	2369	223
15°	2264	2269	2286	2297	2303	639
25°	2102	2114	2147	2158	2169	968
35°	1863	1880	1919	1958	1974	1166
45°	1563	1591	1652	1735	1780	1206
55°	1207	1246	1379	1518	1591	1082
65°	801	879	1096	1268	1357	797
75°	395	523	740	890	940	424
85°	100	139	172	178	189	113
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2375.0	2375.0	2375.0	2375.0	2375.0
2.5°	2358.3	2363.9	2375.0	2375.0	2380.6
5°	2352.8	2358.3	2369.4	2369.4	2369.4
7.5°	2336.1	2341.6	2352.8	2358.3	2358.3
10°	2319.4	2325.0	2336.1	2341.6	2347.2
12.5°	2291.6	2297.1	2313.8	2325.0	2325.0
15°	2263.8	2269.3	2286.0	2297.1	2302.7
17.5°	2230.4	2241.5	2258.2	2269.3	2274.9
20°	2185.9	2197.0	2219.3	2236.0	2241.5
22.5°	2147.0	2158.1	2180.3	2197.0	2208.1
25°	2102.5	2113.6	2147.0	2158.1	2169.2
27.5°	2046.8	2058.0	2085.8	2108.0	2124.7
30°	1991.2	2002.4	2035.7	2063.5	2074.7
32.5°	1930.0	1946.7	1985.7	2007.9	2024.6
35°	1863.3	1880.0	1918.9	1957.9	1974.5
37.5°	1796.6	1813.2	1852.2	1902.2	1924.5
40°	1718.7	1740.9	1791.0	1857.7	1868.9
42.5°	1646.4	1674.2	1718.7	1796.6	1824.4
45°	1562.9	1590.8	1651.9	1735.4	1779.9
47.5°	1485.1	1512.9	1579.6	1679.7	1735.4
50°	1390.5	1429.5	1512.9	1629.7	1685.3
52.5°	1301.5	1334.9	1446.1	1574.1	1640.8
55°	1207.0	1245.9	1379.4	1518.4	1590.8
57.5°	1123.5	1156.9	1307.1	1462.8	1546.3
60°	1017.9	1062.4	1234.8	1401.6	1485.1
62.5°	906.6	973.4	1162.5	1334.9	1423.9
65°	800.9	878.8	1095.7	1268.2	1357.1
67.5°	706.4	789.8	1012.3	1195.8	1279.3
70°	595.1	700.8	928.9	1106.9	1201.4
72.5°	495.0	611.8	834.3	1012.3	1095.7
75°	394.9	522.8	739.8	889.9	940.0
77.5°	305.9	428.3	634.1	678.6	684.1
80°	228.0	339.3	472.8	478.3	495.0
82.5°	155.7	239.2	305.9	333.7	339.3
85°	100.1	139.1	172.4	178.0	189.1
87.5°	44.5	50.1	61.2	55.6	55.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)