

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: P390071

Luminaire Tested: **22CZ2-110VHE-HRP-UNV-L930-CD2-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: P390071
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-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: 7749.3 lumens
Efficiency: N/A
Efficacy: 88.4 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

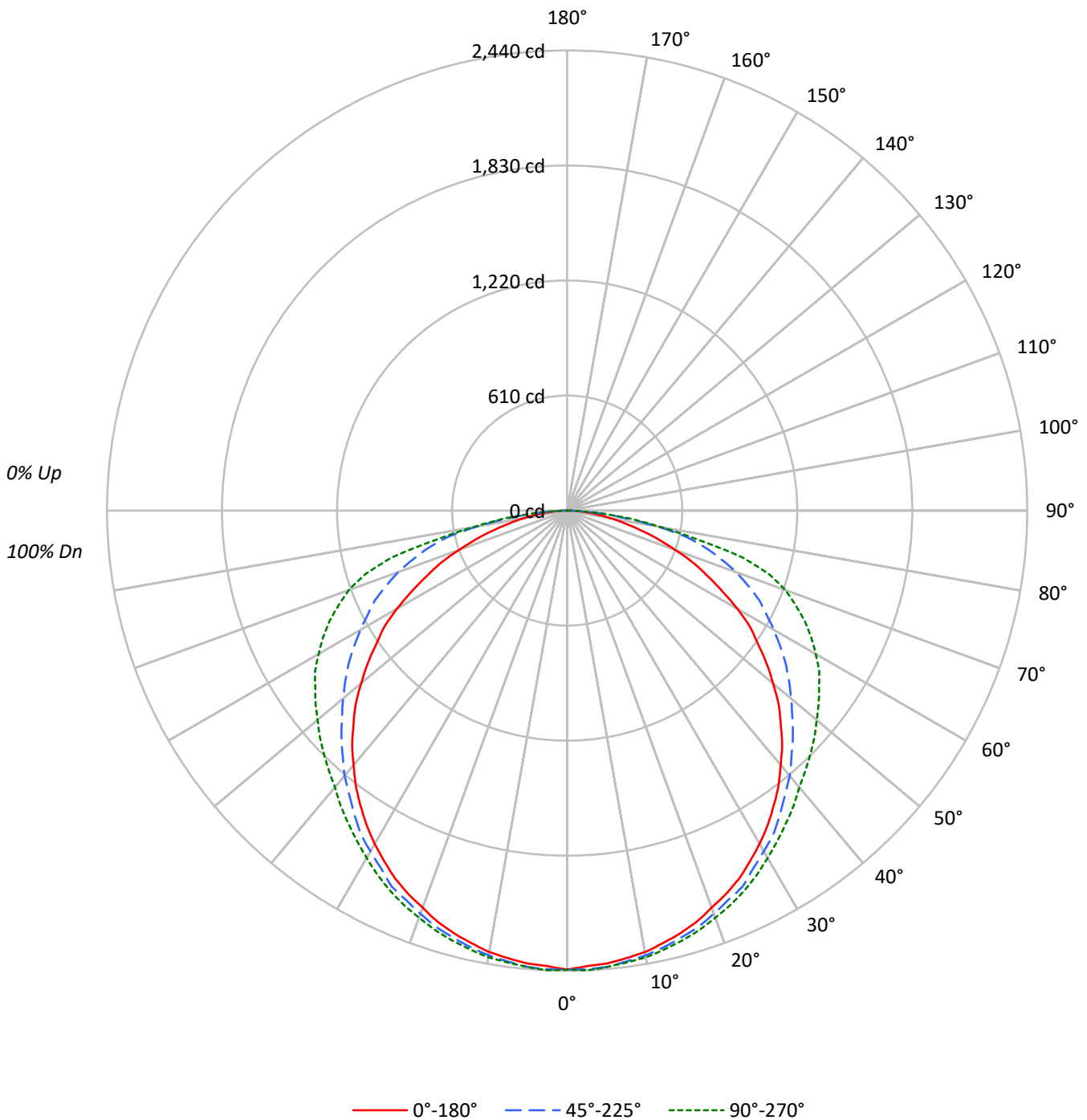
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82					82			
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67					67			
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55					55			
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35					35			
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31					31			
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27					27			
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6550	6550	6550
5°	6514	6560	6560
10°	6496	6542	6574
15°	6464	6527	6575
20°	6416	6514	6579
25°	6398	6534	6601
30°	6341	6483	6607
35°	6274	6461	6648
40°	6188	6448	6728
45°	6096	6443	6942
50°	5966	6491	7231
55°	5803	6633	7649
60°	5614	6811	8192
65°	5227	7151	8857
70°	4799	7490	9688
75°	4208	7883	10017
80°	3622	7510	7863
85°	3168	5456	5984



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.3	3.0
10°-20°	661.1	8.5
20°-30°	1008.7	13.0
30°-40°	1231.6	15.9
40°-50°	1316.8	17.0
50°-60°	1271.1	16.4
60°-70°	1094.2	14.1
70°-80°	740.3	9.6
80°-90°	195.3	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°	1900.1	24.5
0°-40°	3131.6	40.4
0°-60°	5719.5	73.8
0°-90°	7749.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7749.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2434	2434	2434	2434	2434	
5°	2411	2417	2428	2428	2428	229
15°	2320	2326	2343	2354	2360	655
25°	2155	2166	2200	2212	2223	992
35°	1910	1927	1967	2007	2024	1195
45°	1602	1630	1693	1779	1824	1237
55°	1237	1277	1414	1556	1630	1109
65°	821	901	1123	1300	1391	816
75°	405	536	758	912	963	434
85°	103	142	177	182	194	116
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2434.2	2434.2	2434.2	2434.2	2434.2
2.5°	2417.1	2422.8	2434.2	2434.2	2439.9
5°	2411.4	2417.1	2428.5	2428.5	2428.5
7.5°	2394.3	2400.0	2411.4	2417.1	2417.1
10°	2377.2	2382.9	2394.3	2400.0	2405.7
12.5°	2348.7	2354.4	2371.5	2382.9	2382.9
15°	2320.2	2325.9	2343.0	2354.4	2360.1
17.5°	2286.0	2297.4	2314.5	2325.9	2331.6
20°	2240.4	2251.8	2274.6	2291.7	2297.4
22.5°	2200.5	2211.9	2234.7	2251.8	2263.2
25°	2154.9	2166.3	2200.5	2211.9	2223.3
27.5°	2097.9	2109.3	2137.8	2160.6	2177.7
30°	2040.8	2052.2	2086.4	2115.0	2126.4
32.5°	1978.1	1995.2	2035.1	2057.9	2075.0
35°	1909.7	1926.8	1966.7	2006.6	2023.7
37.5°	1841.3	1858.4	1898.3	1949.6	1972.4
40°	1761.5	1784.3	1835.6	1904.0	1915.4
42.5°	1687.4	1715.9	1761.5	1841.3	1869.8
45°	1601.9	1630.4	1693.1	1778.6	1824.2
47.5°	1522.1	1550.6	1619.0	1721.6	1778.6
50°	1425.2	1465.1	1550.6	1670.3	1727.3
52.5°	1334.0	1368.2	1482.2	1613.3	1681.7
55°	1237.0	1277.0	1413.8	1556.3	1630.4
57.5°	1151.5	1185.7	1339.7	1499.3	1584.8
60°	1043.2	1088.8	1265.6	1436.6	1522.1
62.5°	929.2	997.6	1191.4	1368.2	1459.4
65°	820.9	900.7	1123.0	1299.8	1391.0
67.5°	724.0	809.5	1037.5	1225.6	1311.2
70°	610.0	718.3	952.0	1134.4	1231.3
72.5°	507.4	627.1	855.1	1037.5	1123.0
75°	404.7	535.9	758.2	912.1	963.4
77.5°	313.5	439.0	649.9	695.5	701.2
80°	233.7	347.7	484.6	490.3	507.4
82.5°	159.6	245.1	313.5	342.0	347.7
85°	102.6	142.5	176.7	182.4	193.8
87.5°	45.6	51.3	62.7	57.0	57.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)