

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: P388177

Luminaire Tested: **22CZ2-110VHE-UNV-L935-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: P388177
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-L935-CD2-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9239.2 lumens
Efficiency: N/A
Efficacy: 105.3 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

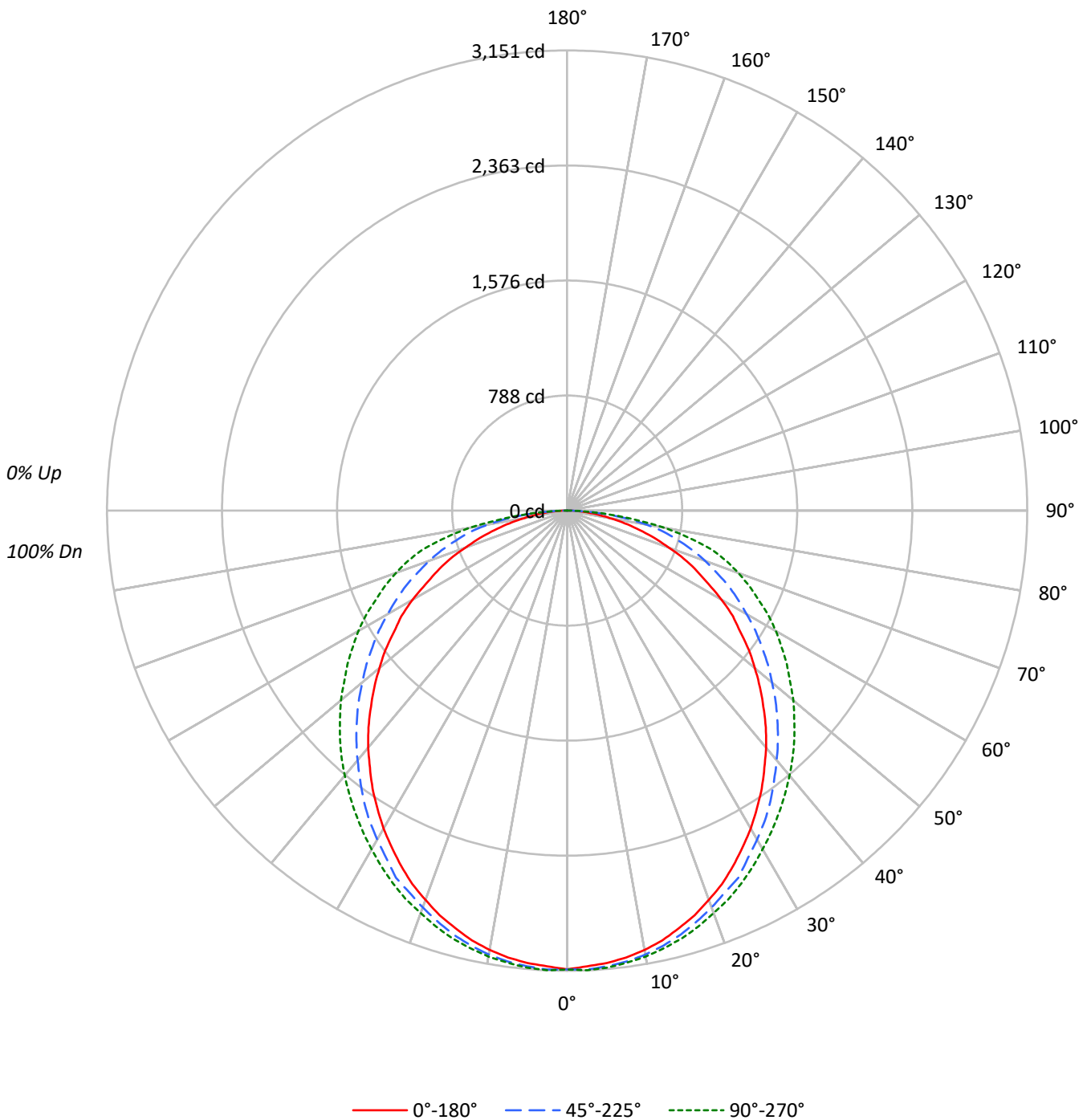
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8454	8454	8454
5°	8400	8461	8486
10°	8348	8435	8472
15°	8245	8372	8448
20°	8124	8280	8397
25°	7978	8234	8369
30°	7812	8080	8321
35°	7632	7975	8304
40°	7442	7841	8320
45°	7232	7751	8374
50°	7023	7670	8470
55°	6783	7636	8617
60°	6582	7634	8882
65°	6253	7758	9205
70°	5830	7905	9801
75°	5341	8177	10588
80°	4651	8525	10428
85°	4069	7580	8281



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	297.1	3.2
10°-20°	846.2	9.2
20°-30°	1270.4	13.7
30°-40°	1518.0	16.4
40°-50°	1578.4	17.1
50°-60°	1463.0	15.8
60°-70°	1200.0	13.0
70°-80°	811.2	8.8
80°-90°	254.9	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°	2413.7	26.1
0°-40°	3931.7	42.6
0°-60°	6973.1	75.5
0°-90°	9239.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9239.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3142	3142	3142	3142	3142	
5°	3110	3114	3132	3137	3142	295
15°	2960	2973	3005	3023	3032	835
25°	2687	2710	2773	2805	2819	1237
35°	2323	2355	2428	2500	2528	1452
45°	1900	1937	2037	2155	2200	1467
55°	1446	1491	1628	1773	1837	1299
65°	982	1037	1218	1378	1446	971
75°	514	600	786	946	1018	545
85°	132	182	246	273	268	150
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3141.5	3141.5	3141.5	3141.5	3141.5
2.5°	3123.3	3132.4	3146.0	3150.6	3150.6
5°	3109.7	3114.2	3132.4	3137.0	3141.5
7.5°	3086.9	3096.0	3114.2	3118.8	3123.3
10°	3055.1	3064.2	3086.9	3096.0	3100.6
12.5°	3014.2	3023.3	3050.6	3064.2	3068.8
15°	2959.6	2973.3	3005.1	3023.3	3032.4
17.5°	2905.1	2918.7	2950.6	2977.8	2986.9
20°	2836.9	2868.7	2891.5	2927.8	2932.4
22.5°	2768.7	2786.9	2827.8	2864.2	2882.4
25°	2686.9	2709.6	2773.2	2805.1	2818.7
27.5°	2600.5	2632.3	2682.3	2732.3	2750.5
30°	2514.1	2536.8	2600.5	2659.6	2677.8
32.5°	2418.6	2450.5	2518.7	2577.8	2605.0
35°	2323.2	2355.0	2427.7	2500.5	2527.7
37.5°	2218.6	2255.0	2327.7	2414.1	2450.5
40°	2118.6	2145.9	2232.2	2336.8	2368.6
42.5°	2014.0	2045.8	2136.8	2250.4	2286.8
45°	1900.4	1936.7	2036.7	2154.9	2200.4
47.5°	1791.2	1827.6	1936.7	2054.9	2109.5
50°	1677.6	1723.1	1832.2	1968.6	2023.1
52.5°	1568.5	1609.4	1732.1	1873.1	1923.1
55°	1445.7	1491.2	1627.6	1773.1	1836.7
57.5°	1345.7	1377.5	1527.6	1677.6	1741.2
60°	1223.0	1263.9	1418.4	1577.6	1650.3
62.5°	1091.1	1159.3	1318.4	1482.1	1554.8
65°	982.0	1036.6	1218.4	1377.5	1445.7
67.5°	868.3	927.4	1104.8	1273.0	1350.3
70°	741.0	818.3	1004.7	1172.9	1245.7
72.5°	627.4	709.2	900.2	1063.8	1141.1
75°	513.7	600.1	786.5	945.6	1018.4
77.5°	404.6	500.1	681.9	804.7	850.2
80°	300.1	391.0	550.1	636.5	672.9
82.5°	209.1	286.4	404.6	450.1	459.2
85°	131.8	181.9	245.5	272.8	268.2
87.5°	59.1	72.7	90.9	100.0	95.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)