

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: P388611

Luminaire Tested: **24CZ2-110VHE-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: P388611
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-UNV-L940-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9249.7 lumens
Efficiency: N/A
Efficacy: 119.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

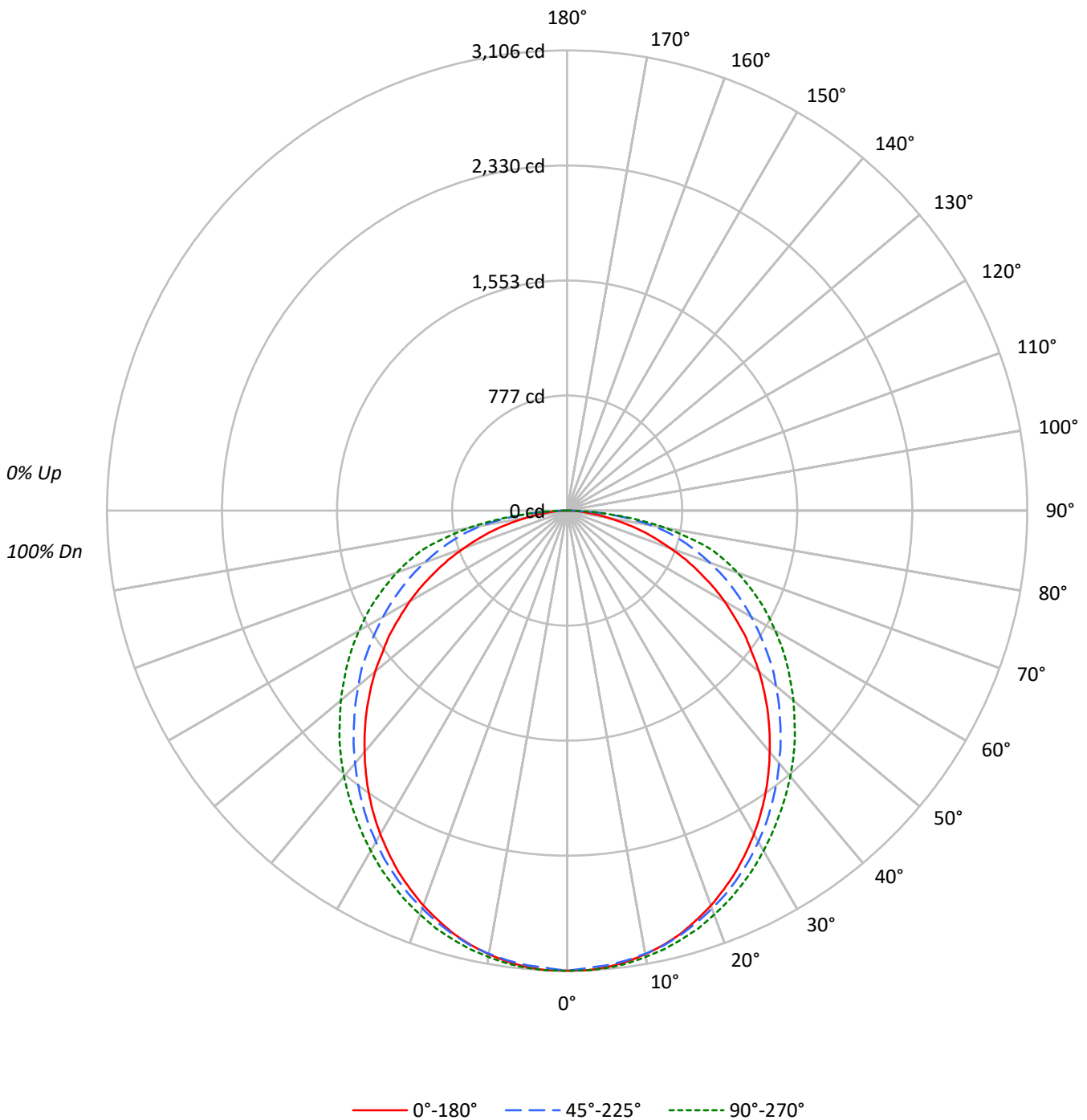
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4179	4179	4179
5°	4178	4161	4186
10°	4154	4150	4180
15°	4120	4128	4171
20°	4062	4093	4155
25°	3996	4056	4138
30°	3918	4010	4120
35°	3833	3960	4107
40°	3736	3909	4115
45°	3642	3871	4135
50°	3541	3851	4174
55°	3433	3845	4251
60°	3298	3863	4361
65°	3125	3921	4550
70°	2902	4020	4809
75°	2648	4221	5216
80°	2177	4544	5215
85°	1667	4194	4480



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.7	3.2
10°-20°	838.5	9.1
20°-30°	1261.8	13.6
30°-40°	1512.2	16.3
40°-50°	1575.9	17.0
50°-60°	1466.2	15.9
60°-70°	1207.6	13.1
70°-80°	822.4	8.9
80°-90°	271.5	2.9
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°	2394.1	25.9
0°-40°	3906.3	42.2
0°-60°	6948.3	75.1
0°-90°	9249.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9249.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3106	3106	3106	3106	3106	
5°	3093	3093	3081	3096	3099	294
15°	2957	2960	2964	2991	2994	833
25°	2692	2704	2732	2778	2788	1239
35°	2334	2362	2411	2476	2500	1459
45°	1914	1954	2034	2136	2173	1476
55°	1463	1513	1639	1769	1812	1304
65°	982	1065	1232	1377	1429	974
75°	509	624	812	957	1003	537
85°	108	210	272	290	290	134
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3105.6	3105.6	3105.6	3105.6	3105.6
2.5°	3105.6	3105.6	3090.1	3105.6	3105.6
5°	3093.2	3093.2	3080.9	3096.3	3099.4
7.5°	3071.6	3074.7	3062.3	3080.9	3083.9
10°	3040.7	3043.8	3037.6	3056.2	3059.2
12.5°	3003.7	3006.8	3006.8	3028.4	3031.5
15°	2957.4	2960.5	2963.6	2991.3	2994.4
17.5°	2898.7	2908.0	2914.2	2948.1	2954.3
20°	2837.0	2846.2	2858.6	2895.6	2901.8
22.5°	2766.0	2778.3	2799.9	2840.1	2849.3
25°	2691.9	2704.2	2732.0	2778.3	2787.6
27.5°	2608.5	2627.1	2661.0	2710.4	2722.8
30°	2522.1	2540.6	2580.8	2633.2	2651.8
32.5°	2429.5	2454.2	2500.5	2559.1	2577.7
35°	2333.8	2361.6	2411.0	2475.8	2500.5
37.5°	2231.9	2262.8	2321.4	2392.5	2423.3
40°	2127.0	2164.0	2225.8	2309.1	2343.1
42.5°	2022.0	2056.0	2133.1	2222.7	2259.7
45°	1914.0	1954.1	2034.4	2136.2	2173.3
47.5°	1802.8	1843.0	1938.7	2046.7	2080.7
50°	1691.7	1731.8	1839.9	1954.1	1994.2
52.5°	1571.3	1623.8	1747.3	1861.5	1901.6
55°	1463.3	1512.6	1639.2	1768.9	1812.1
57.5°	1339.8	1398.4	1537.3	1673.2	1719.5
60°	1225.6	1287.3	1435.5	1574.4	1620.7
62.5°	1108.2	1176.2	1333.6	1475.6	1528.1
65°	981.7	1065.0	1231.7	1376.8	1429.3
67.5°	867.5	953.9	1129.9	1278.0	1324.3
70°	737.8	842.8	1021.8	1170.0	1222.5
72.5°	626.7	731.6	919.9	1065.0	1117.5
75°	509.4	623.6	811.9	957.0	1003.3
77.5°	392.1	518.6	706.9	818.1	833.5
80°	280.9	413.7	586.5	651.4	673.0
82.5°	197.6	318.0	432.2	475.4	487.8
85°	108.0	209.9	271.7	290.2	290.2
87.5°	46.3	89.5	108.0	111.1	114.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)