

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: P388616

Luminaire Tested: **24CZ2-110VHE-UNV-L950-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: P388616
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-L950-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10062.6 lumens
Efficiency: N/A
Efficacy: 130.0 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

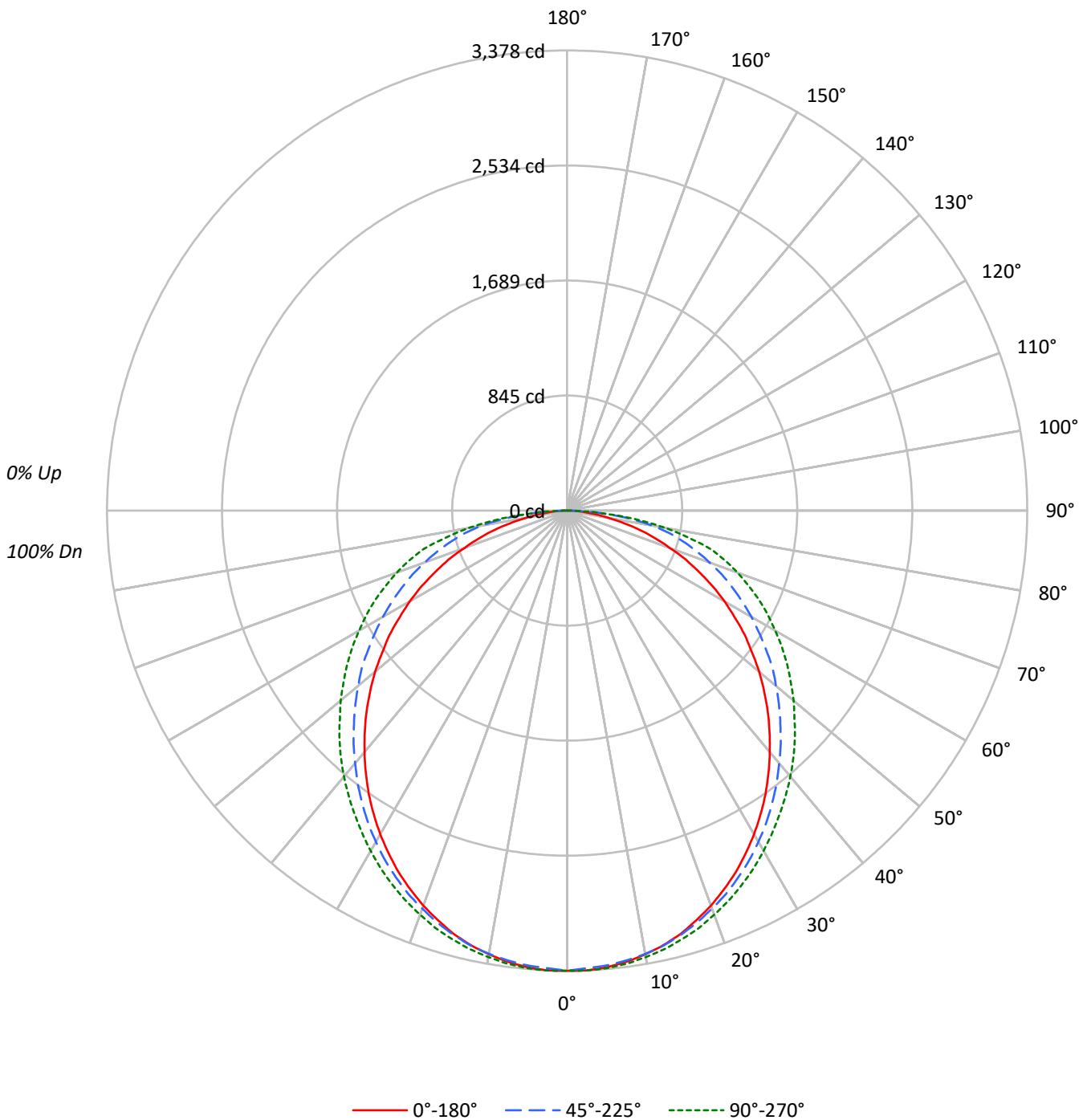
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4546	4546	4546
5°	4545	4527	4554
10°	4520	4515	4547
15°	4482	4491	4538
20°	4419	4453	4520
25°	4348	4412	4502
30°	4263	4362	4482
35°	4170	4308	4468
40°	4064	4253	4477
45°	3962	4211	4499
50°	3852	4190	4541
55°	3734	4183	4624
60°	3588	4202	4744
65°	3400	4266	4950
70°	3157	4373	5232
75°	2881	4591	5674
80°	2368	4944	5673
85°	1814	4562	4874



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.5	3.2
10°-20°	912.2	9.1
20°-30°	1372.7	13.6
30°-40°	1645.1	16.3
40°-50°	1714.3	17.0
50°-60°	1595.0	15.9
60°-70°	1313.7	13.1
70°-80°	894.7	8.9
80°-90°	295.4	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°	2604.5	25.9
0°-40°	4249.6	42.2
0°-60°	7558.9	75.1
0°-90°	10062.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10062.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3378	3378	3378	3378	3378	
5°	3365	3365	3352	3368	3372	319
15°	3217	3221	3224	3254	3258	906
25°	2928	2942	2972	3022	3033	1348
35°	2539	2569	2623	2693	2720	1587
45°	2082	2126	2213	2324	2364	1606
55°	1592	1646	1783	1924	1971	1419
65°	1068	1159	1340	1498	1555	1060
75°	554	678	883	1041	1092	584
85°	118	228	296	316	316	146
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3378.5	3378.5	3378.5	3378.5	3378.5
2.5°	3378.5	3378.5	3361.7	3378.5	3378.5
5°	3365.0	3365.0	3351.6	3368.4	3371.8
7.5°	3341.5	3344.9	3331.5	3351.6	3355.0
10°	3308.0	3311.3	3304.6	3324.7	3328.1
12.5°	3267.7	3271.0	3271.0	3294.5	3297.9
15°	3217.3	3220.6	3224.0	3254.2	3257.6
17.5°	3153.5	3163.5	3170.3	3207.2	3213.9
20°	3086.3	3096.4	3109.8	3150.1	3156.8
22.5°	3009.1	3022.5	3046.0	3089.7	3099.7
25°	2928.5	2941.9	2972.1	3022.5	3032.6
27.5°	2837.8	2857.9	2894.9	2948.6	2962.0
30°	2743.8	2763.9	2807.6	2864.7	2884.8
32.5°	2643.0	2669.9	2720.2	2784.1	2804.2
35°	2538.9	2569.1	2622.9	2693.4	2720.2
37.5°	2428.1	2461.7	2525.5	2602.7	2636.3
40°	2313.9	2354.2	2421.4	2512.0	2549.0
42.5°	2199.7	2236.6	2320.6	2418.0	2458.3
45°	2082.2	2125.8	2213.1	2324.0	2364.3
47.5°	1961.3	2004.9	2109.0	2226.6	2263.5
50°	1840.4	1884.0	2001.6	2125.8	2169.5
52.5°	1709.4	1766.5	1900.8	2025.1	2068.7
55°	1591.8	1645.6	1783.3	1924.3	1971.3
57.5°	1457.5	1521.3	1672.4	1820.2	1870.6
60°	1333.3	1400.4	1561.6	1712.7	1763.1
62.5°	1205.6	1279.5	1450.8	1605.3	1662.4
65°	1067.9	1158.6	1340.0	1497.8	1554.9
67.5°	943.7	1037.7	1229.1	1390.3	1440.7
70°	802.6	916.8	1111.6	1272.8	1329.9
72.5°	681.7	795.9	1000.8	1158.6	1215.7
75°	554.1	678.4	883.2	1041.1	1091.5
77.5°	426.5	564.2	769.1	890.0	906.7
80°	305.6	450.0	638.1	708.6	732.1
82.5°	214.9	345.9	470.2	517.2	530.6
85°	117.5	228.4	295.5	315.7	315.7
87.5°	50.4	97.4	117.5	120.9	124.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)