

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: P389551

Luminaire Tested: **24CZ2-110VHE-S-UNV-L950-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: P389551
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-S-UNV-L950-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10442.0 lumens
Efficiency: N/A
Efficacy: 134.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

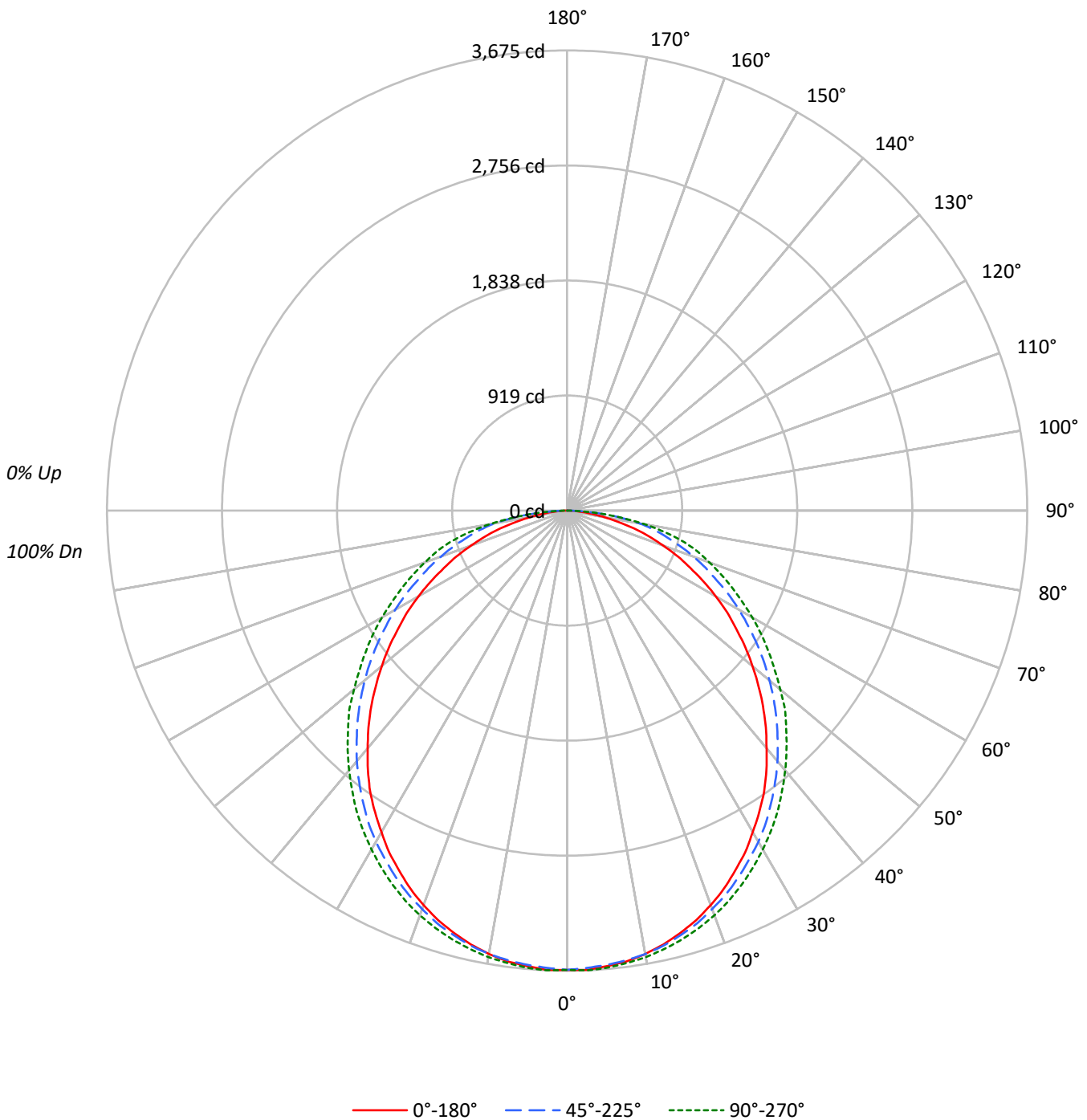
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4936	4936	4936
5°	4932	4919	4950
10°	4912	4912	4948
15°	4865	4888	4939
20°	4801	4849	4925
25°	4712	4801	4895
30°	4607	4746	4854
35°	4505	4669	4816
40°	4352	4591	4760
45°	4210	4500	4708
50°	4048	4416	4652
55°	3867	4334	4606
60°	3686	4266	4596
65°	3453	4192	4625
70°	3197	4214	4749
75°	2862	4294	5018
80°	2313	4549	4909
85°	1741	3994	3892



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.3	3.3
10°-20°	992.3	9.5
20°-30°	1491.7	14.3
30°-40°	1776.8	17.0
40°-50°	1818.5	17.4
50°-60°	1637.2	15.7
60°-70°	1285.7	12.3
70°-80°	834.4	8.0
80°-90°	258.1	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°	2831.3	27.1
0°-40°	4608.1	44.1
0°-60°	8063.8	77.2
0°-90°	10442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10442.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3668	3668	3668	3668	3668	
5°	3652	3658	3642	3662	3665	347
15°	3493	3502	3509	3539	3546	985
25°	3174	3201	3234	3287	3297	1462
35°	2743	2776	2842	2912	2932	1711
45°	2212	2265	2365	2454	2474	1706
55°	1648	1721	1847	1944	1964	1478
65°	1085	1168	1317	1426	1453	1080
75°	551	657	826	939	965	583
85°	113	209	259	252	252	136
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3668.3	3668.3	3668.3	3668.3	3668.3
2.5°	3671.7	3671.7	3655.1	3671.7	3675.0
5°	3651.8	3658.4	3641.8	3661.7	3665.0
7.5°	3631.9	3631.9	3621.9	3641.8	3645.1
10°	3595.4	3598.7	3595.4	3618.6	3621.9
12.5°	3548.9	3555.6	3558.9	3582.1	3585.4
15°	3492.6	3502.5	3509.1	3539.0	3545.6
17.5°	3429.5	3439.5	3456.1	3489.2	3495.9
20°	3353.3	3366.5	3386.4	3429.5	3439.5
22.5°	3270.3	3283.6	3316.8	3356.6	3373.2
25°	3174.1	3200.7	3233.8	3286.9	3296.9
27.5°	3078.0	3101.2	3144.3	3200.7	3213.9
30°	2965.2	3001.7	3054.7	3111.1	3124.4
32.5°	2855.7	2892.2	2955.2	3014.9	3031.5
35°	2743.0	2776.1	2842.5	2912.1	2932.0
37.5°	2613.6	2656.7	2729.7	2799.4	2819.3
40°	2477.6	2530.7	2613.6	2686.6	2709.8
42.5°	2348.3	2404.7	2487.6	2567.2	2593.7
45°	2212.3	2265.4	2364.9	2454.4	2474.3
47.5°	2073.0	2132.7	2238.8	2328.4	2361.5
50°	1933.7	1996.7	2109.5	2202.3	2222.2
52.5°	1794.4	1860.7	1980.1	2079.6	2089.6
55°	1648.4	1721.4	1847.4	1943.6	1963.5
57.5°	1515.8	1578.8	1714.8	1814.3	1837.5
60°	1369.8	1439.5	1585.4	1678.3	1708.1
62.5°	1230.5	1303.5	1456.1	1548.9	1575.5
65°	1084.6	1167.5	1316.8	1426.2	1452.7
67.5°	958.5	1038.1	1197.4	1303.5	1330.0
70°	812.6	902.2	1071.3	1180.8	1207.3
72.5°	686.6	779.4	948.6	1054.7	1094.5
75°	550.6	656.7	825.9	938.6	965.2
77.5°	417.9	540.6	713.1	799.3	799.3
80°	298.5	427.9	587.1	626.9	633.5
82.5°	195.7	321.7	434.5	431.2	431.2
85°	112.8	209.0	258.7	252.1	252.1
87.5°	43.1	86.2	92.9	92.9	89.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)