

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: P389552

Luminaire Tested: **24CZ2-110VHE-S-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: P389552
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-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

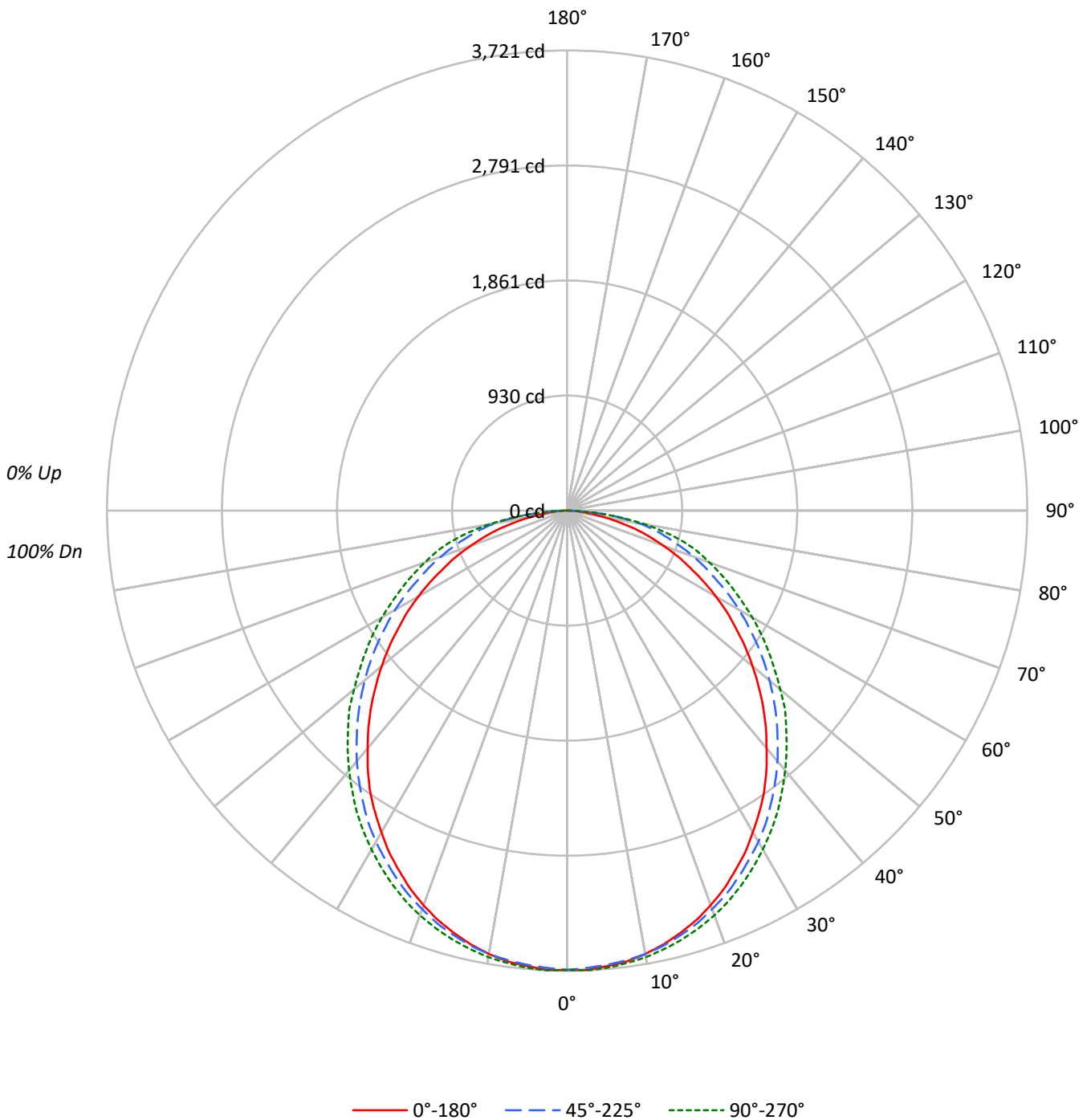
Lumens per Lamp: N/A
Luminaire Lumens: 10573.1 lumens
Efficiency: N/A
Efficacy: 136.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	4998	4998	4998
5°	4994	4980	5012
10°	4974	4974	5011
15°	4926	4949	5001
20°	4862	4910	4987
25°	4771	4861	4956
30°	4665	4806	4915
35°	4562	4728	4876
40°	4406	4648	4819
45°	4262	4556	4767
50°	4099	4471	4710
55°	3915	4388	4664
60°	3732	4320	4654
65°	3496	4245	4683
70°	3237	4268	4809
75°	2898	4347	5081
80°	2342	4606	4971
85°	1763	4045	3940



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.6	3.3
10°-20°	1004.8	9.5
20°-30°	1510.4	14.3
30°-40°	1799.1	17.0
40°-50°	1841.3	17.4
50°-60°	1657.7	15.7
60°-70°	1301.9	12.3
70°-80°	844.9	8.0
80°-90°	261.3	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°	2866.8	27.1
0°-40°	4666.0	44.1
0°-60°	8165.0	77.2
0°-90°	10573.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10573.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3714	3714	3714	3714	3714	
5°	3698	3704	3688	3708	3711	351
15°	3536	3546	3553	3583	3590	997
25°	3214	3241	3274	3328	3338	1481
35°	2777	2811	2878	2949	2969	1733
45°	2240	2294	2394	2485	2505	1727
55°	1669	1743	1871	1968	1988	1496
65°	1098	1182	1333	1444	1471	1093
75°	558	665	836	950	977	590
85°	114	212	262	255	255	138
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3714.4	3714.4	3714.4	3714.4	3714.4
2.5°	3717.8	3717.8	3701.0	3717.8	3721.1
5°	3697.6	3704.3	3687.5	3707.7	3711.0
7.5°	3677.5	3677.5	3667.4	3687.5	3690.9
10°	3640.5	3643.9	3640.5	3664.0	3667.4
12.5°	3593.5	3600.2	3603.6	3627.1	3630.4
15°	3536.4	3546.5	3553.2	3583.4	3590.1
17.5°	3472.6	3482.7	3499.5	3533.0	3539.8
20°	3395.4	3408.8	3428.9	3472.6	3482.7
22.5°	3311.4	3324.8	3358.4	3398.7	3415.5
25°	3214.0	3240.9	3274.4	3328.2	3338.3
27.5°	3116.6	3140.1	3183.8	3240.9	3254.3
30°	3002.4	3039.4	3093.1	3150.2	3163.6
32.5°	2891.6	2928.5	2992.3	3052.8	3069.6
35°	2777.4	2811.0	2878.2	2948.7	2968.8
37.5°	2646.4	2690.1	2764.0	2834.5	2854.6
40°	2508.7	2562.5	2646.4	2720.3	2743.8
42.5°	2377.8	2434.8	2518.8	2599.4	2626.3
45°	2240.1	2293.8	2394.5	2485.2	2505.4
47.5°	2099.0	2159.5	2266.9	2357.6	2391.2
50°	1958.0	2021.8	2135.9	2230.0	2250.1
52.5°	1816.9	1884.1	2005.0	2105.7	2115.8
55°	1669.1	1743.0	1870.6	1968.0	1988.2
57.5°	1534.8	1598.6	1736.3	1837.0	1860.6
60°	1387.0	1457.5	1605.3	1699.4	1729.6
62.5°	1246.0	1319.9	1474.3	1568.4	1595.2
65°	1098.2	1182.2	1333.3	1444.1	1471.0
67.5°	970.6	1051.2	1212.4	1319.9	1346.7
70°	822.8	913.5	1084.8	1195.6	1222.5
72.5°	695.2	789.2	960.5	1068.0	1108.3
75°	557.5	665.0	836.2	950.4	977.3
77.5°	423.2	547.4	722.1	809.4	809.4
80°	302.3	433.2	594.4	634.7	641.5
82.5°	198.1	325.8	440.0	436.6	436.6
85°	114.2	211.6	262.0	255.2	255.2
87.5°	43.7	87.3	94.0	94.0	90.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)