

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: P389119

Luminaire Tested: **22CZ2-110VHE-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: P389119  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-110VHE-S-UNV-L950-CD2-SWPD1-U  
Description: 2x2 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: 10410.9 lumens  
Efficiency: N/A  
Efficacy: 118.7 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

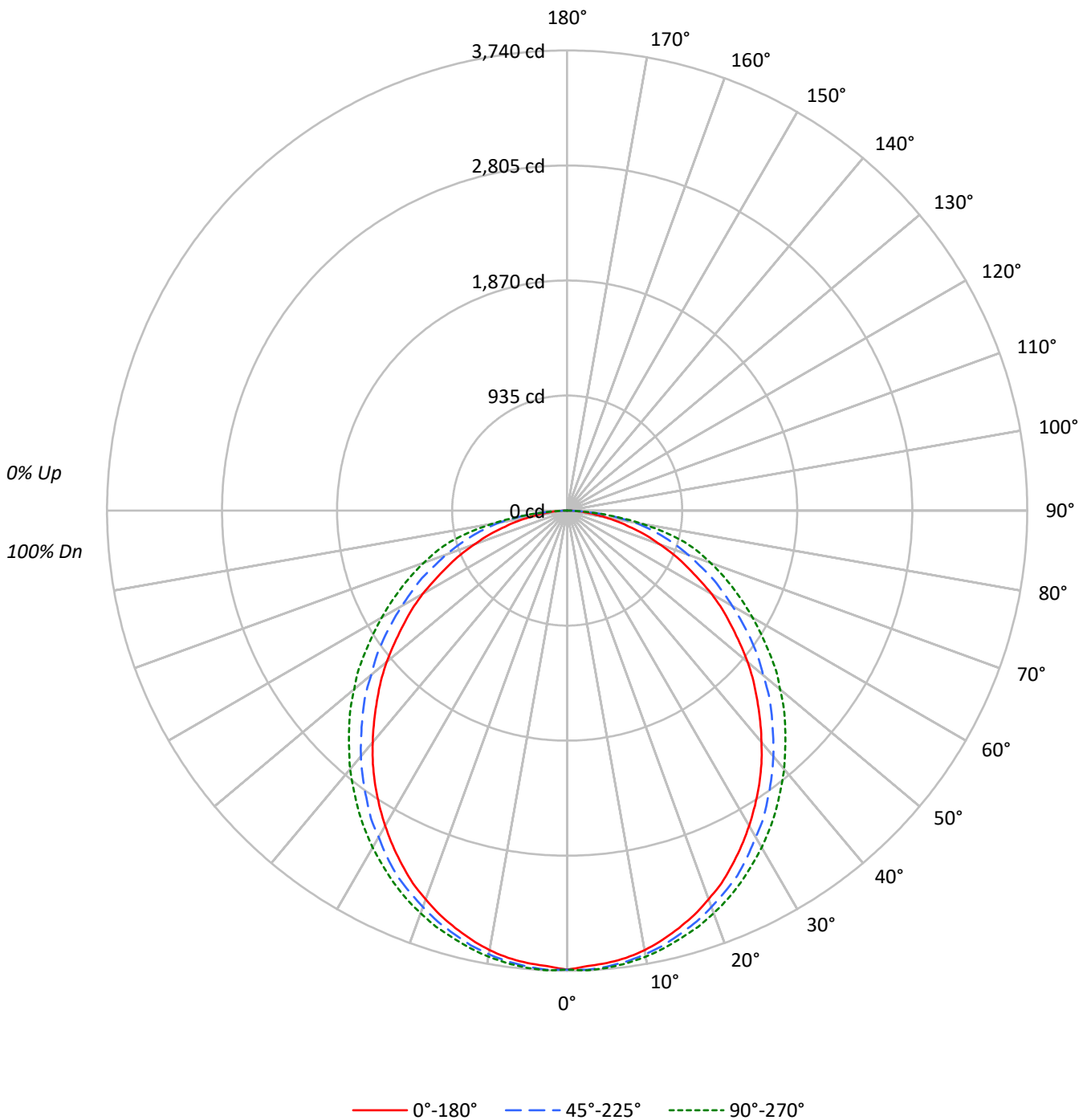
Input Watts (W): 87.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10039	10039	10039
5°	9972	10051	10077
10°	9915	10008	10061
15°	9784	9919	10014
20°	9626	9821	9974
25°	9432	9721	9908
30°	9192	9524	9826
35°	8936	9351	9734
40°	8634	9163	9641
45°	8319	8947	9539
50°	8012	8704	9456
55°	7635	8546	9389
60°	7294	8339	9359
65°	6804	8289	9465
70°	6268	8217	9746
75°	5656	8333	10253
80°	4892	8582	9636
85°	4051	7200	7200



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	352.8	3.4
10°-20°	1004.0	9.6
20°-30°	1502.2	14.4
30°-40°	1779.0	17.1
40°-50°	1813.0	17.4
50°-60°	1625.0	15.6
60°-70°	1272.2	12.2
70°-80°	820.4	7.9
80°-90°	242.4	2.3
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°	2859.0	27.5
0°-40°	4638.0	44.5
0°-60°	8076.0	77.6
0°-90°	10410.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10410.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3731	3731	3731	3731	3731	
5°	3692	3701	3721	3726	3731	350
15°	3512	3531	3560	3590	3594	990
25°	3177	3206	3274	3318	3337	1462
35°	2720	2754	2846	2934	2963	1700
45°	2186	2234	2351	2472	2506	1688
55°	1627	1681	1822	1948	2001	1459
65°	1069	1132	1302	1428	1486	1062
75°	544	627	802	938	986	583
85°	131	180	233	233	233	154
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3730.6	3730.6	3730.6	3730.6	3730.6
2.5°	3706.3	3716.0	3735.4	3740.3	3740.3
5°	3691.7	3701.4	3720.8	3725.7	3730.6
7.5°	3667.4	3672.3	3696.5	3706.3	3711.1
10°	3628.5	3638.3	3662.5	3677.1	3682.0
12.5°	3575.1	3589.7	3618.8	3638.3	3643.1
15°	3512.0	3531.4	3560.5	3589.7	3594.5
17.5°	3444.0	3463.4	3502.2	3536.3	3546.0
20°	3361.4	3385.7	3429.4	3468.2	3482.8
22.5°	3278.8	3298.2	3351.7	3400.2	3414.8
25°	3176.8	3205.9	3273.9	3317.7	3337.1
27.5°	3069.9	3103.9	3171.9	3230.2	3249.7
30°	2958.2	2992.2	3065.1	3137.9	3162.2
32.5°	2841.6	2880.5	2967.9	3040.8	3065.1
35°	2720.2	2754.2	2846.5	2933.9	2963.1
37.5°	2593.9	2623.0	2729.9	2822.2	2851.3
40°	2457.9	2496.7	2608.5	2715.3	2744.5
42.5°	2321.9	2365.6	2477.3	2593.9	2623.0
45°	2185.9	2234.4	2351.0	2472.5	2506.5
47.5°	2054.7	2093.6	2224.7	2341.3	2389.9
50°	1913.8	1952.7	2079.0	2210.2	2258.7
52.5°	1768.1	1821.6	1957.6	2083.9	2142.2
55°	1627.3	1680.7	1821.6	1947.9	2001.3
57.5°	1496.1	1539.8	1685.5	1816.7	1870.1
60°	1355.2	1394.1	1549.5	1690.4	1739.0
62.5°	1204.7	1262.9	1423.2	1554.4	1612.7
65°	1068.6	1131.8	1301.8	1428.1	1486.4
67.5°	942.4	1000.6	1165.8	1301.8	1365.0
70°	796.6	874.3	1044.4	1180.4	1238.7
72.5°	680.0	748.1	922.9	1058.9	1122.1
75°	544.0	626.6	801.5	937.5	986.1
77.5°	432.3	514.9	680.0	786.9	811.2
80°	315.7	398.3	553.8	607.2	621.8
82.5°	213.7	291.4	398.3	412.9	417.7
85°	131.2	179.7	233.2	233.2	233.2
87.5°	63.1	72.9	82.6	77.7	77.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)