

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: P387631

Luminaire Tested: **22CZ2-110VHE-SQR-UNV-L940-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: P387631
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-110VHE-SQR-UNV-L940-CD2-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8964.9 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

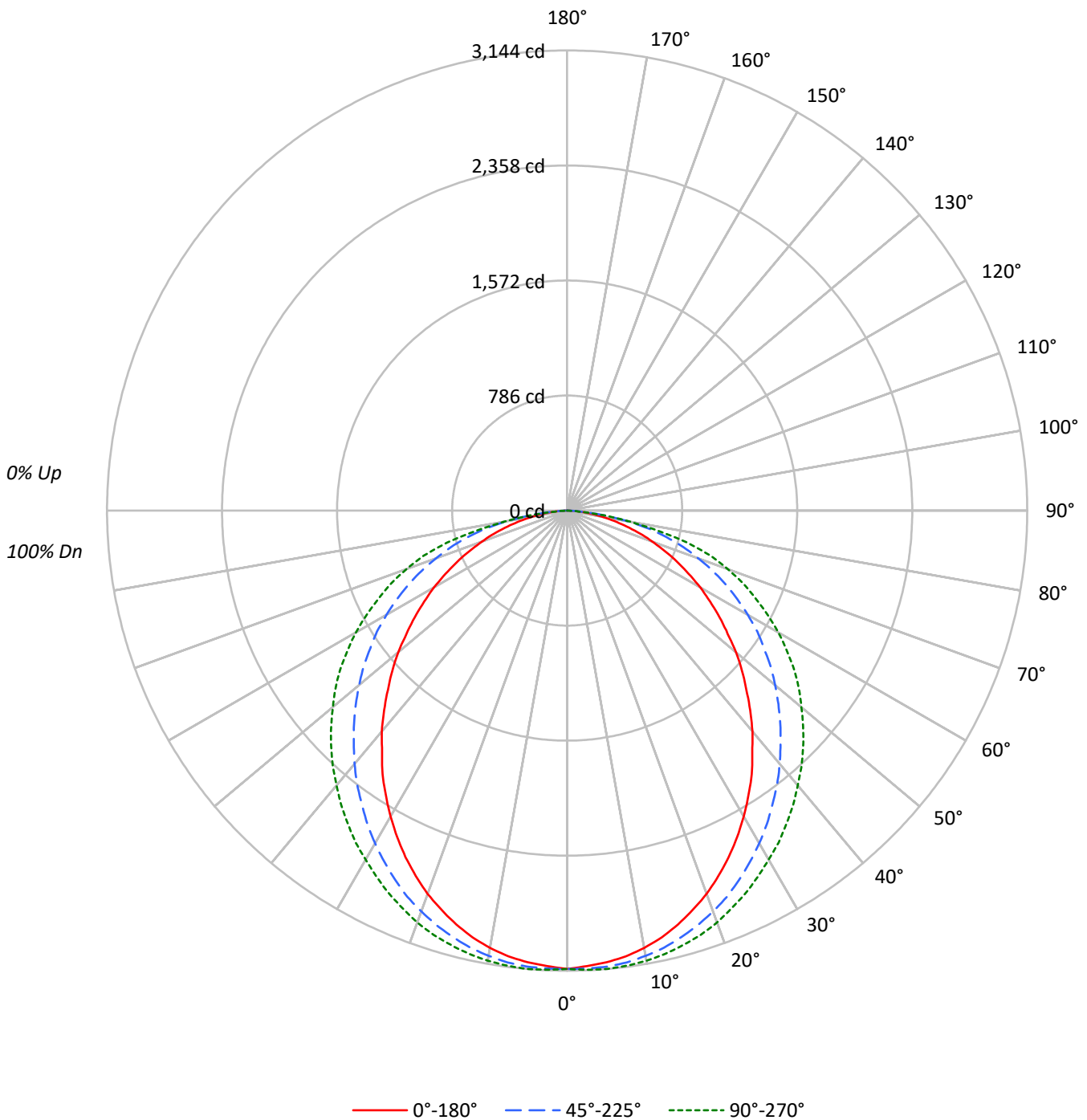
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	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	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	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°	8427	8427	8427
5°	8367	8448	8494
10°	8290	8441	8534
15°	8155	8405	8559
20°	7981	8347	8578
25°	7757	8262	8566
30°	7497	8158	8554
35°	7227	8037	8582
40°	6920	7937	8610
45°	6591	7837	8679
50°	6306	7767	8746
55°	5969	7705	8884
60°	5656	7671	8977
65°	5283	7613	9049
70°	4854	7499	9173
75°	4379	7300	8848
80°	3758	6462	6660
85°	3023	3810	3023



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.9	3.3
10°-20°	848.8	9.5
20°-30°	1274.9	14.2
30°-40°	1520.5	17.0
40°-50°	1572.1	17.5
50°-60°	1445.3	16.1
60°-70°	1150.6	12.8
70°-80°	703.0	7.8
80°-90°	152.8	1.7
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°	2420.6	27.0
0°-40°	3941.1	44.0
0°-60°	6958.5	77.6
0°-90°	8964.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8964.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3132	3132	3132	3132	3132	
5°	3098	3106	3127	3140	3144	294
15°	2927	2962	3017	3059	3072	824
25°	2612	2676	2783	2859	2885	1202
35°	2200	2293	2447	2574	2612	1372
45°	1732	1855	2059	2225	2281	1339
55°	1272	1413	1642	1830	1894	1138
65°	830	970	1196	1362	1421	822
75°	421	545	702	826	851	449
85°	98	119	123	106	98	113
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3131.7	3131.7	3131.7	3131.7	3131.7
2.5°	3114.6	3118.9	3131.7	3140.2	3140.2
5°	3097.6	3106.1	3127.4	3140.2	3144.4
7.5°	3072.1	3084.9	3114.6	3131.7	3135.9
10°	3033.8	3050.8	3089.1	3114.6	3123.1
12.5°	2987.0	3012.5	3059.3	3093.4	3101.9
15°	2927.4	2961.5	3016.8	3059.3	3072.1
17.5°	2859.3	2901.9	2970.0	3021.0	3038.0
20°	2787.0	2829.6	2914.7	2974.2	2995.5
22.5°	2701.9	2757.2	2855.1	2923.2	2940.2
25°	2612.5	2676.4	2782.7	2859.3	2884.9
27.5°	2514.7	2591.3	2706.2	2799.8	2821.0
30°	2412.6	2493.4	2625.3	2727.4	2753.0
32.5°	2306.2	2399.8	2540.2	2655.1	2689.1
35°	2199.8	2293.4	2446.6	2574.3	2612.5
37.5°	2076.4	2187.1	2357.3	2489.2	2536.0
40°	1970.0	2076.4	2259.4	2404.1	2450.9
42.5°	1850.9	1965.8	2157.3	2314.7	2370.0
45°	1731.8	1855.2	2059.4	2225.3	2280.7
47.5°	1621.1	1744.5	1957.3	2131.7	2187.1
50°	1506.3	1633.9	1855.2	2033.9	2089.2
52.5°	1382.9	1523.3	1753.0	1931.8	1995.6
55°	1272.2	1412.6	1642.4	1829.6	1893.5
57.5°	1157.4	1302.0	1540.3	1719.0	1778.6
60°	1051.0	1191.4	1425.4	1599.9	1667.9
62.5°	936.1	1080.8	1310.5	1480.7	1544.6
65°	829.7	970.1	1195.6	1361.6	1421.2
67.5°	723.3	863.8	1076.5	1233.9	1302.0
70°	617.0	757.4	953.1	1106.3	1165.9
72.5°	523.4	646.8	834.0	974.4	1029.7
75°	421.2	544.6	702.1	825.5	851.0
77.5°	327.6	438.3	570.2	625.5	634.0
80°	242.5	327.6	417.0	429.8	429.8
82.5°	161.7	225.5	259.6	263.8	259.6
85°	97.9	119.1	123.4	106.4	97.9
87.5°	34.0	34.0	21.3	12.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)