

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: P387818

Luminaire Tested: **22CZ2-29VHE-SQR-UNV-L930-CD1-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: P387818  
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: 22CZ2-29VHE-SQR-UNV-L930-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2467.5 lumens  
Efficiency: N/A  
Efficacy: 113.7 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

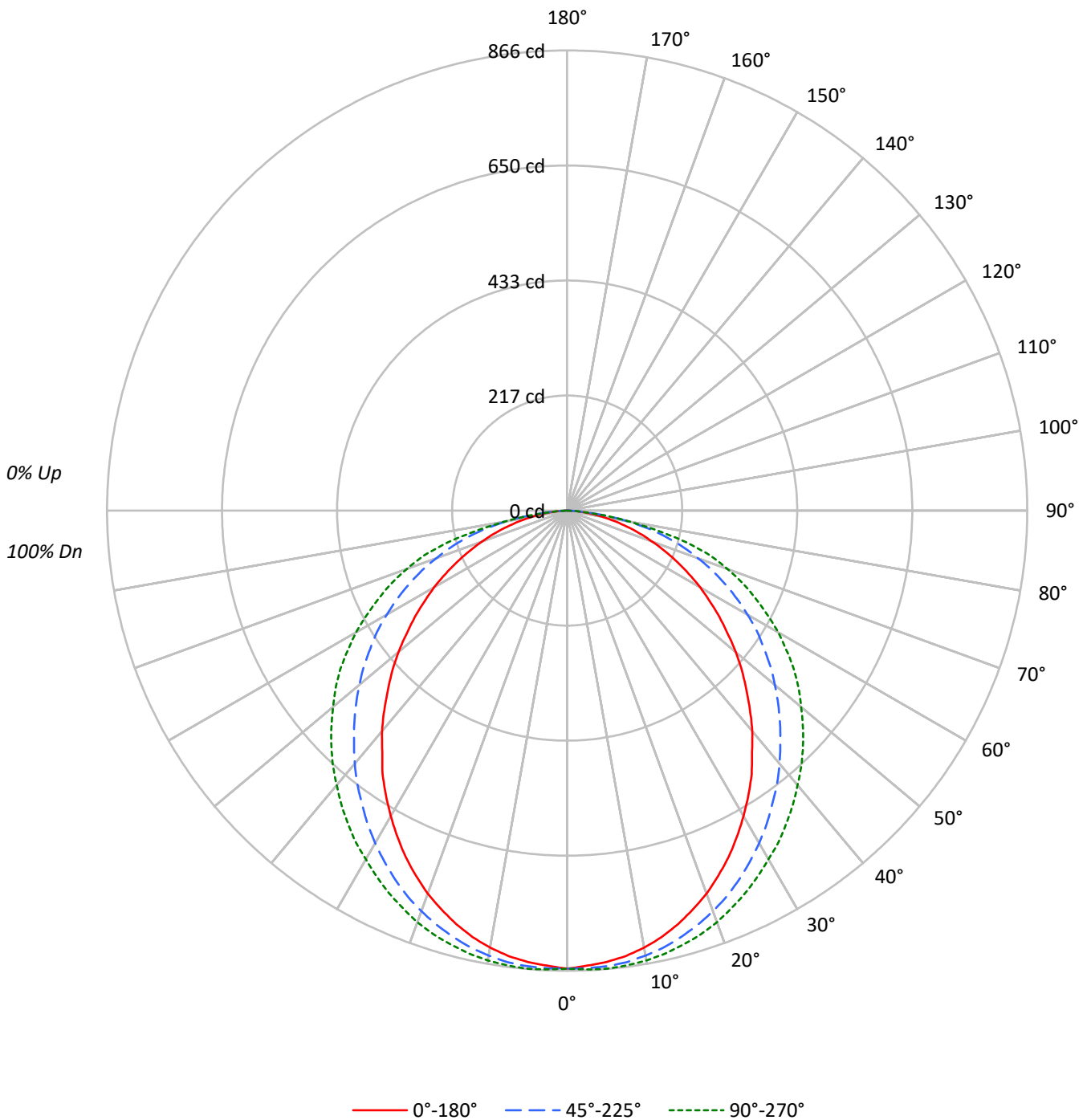
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2320	2320	2320
5°	2303	2325	2338
10°	2282	2323	2349
15°	2245	2313	2356
20°	2197	2297	2361
25°	2135	2274	2358
30°	2063	2245	2354
35°	1989	2212	2362
40°	1905	2185	2370
45°	1814	2157	2389
50°	1736	2138	2407
55°	1643	2121	2445
60°	1557	2111	2471
65°	1454	2096	2491
70°	1336	2064	2525
75°	1205	2009	2435
80°	1035	1779	1833
85°	831	1050	831



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.7	3.3
10°-20°	233.6	9.5
20°-30°	350.9	14.2
30°-40°	418.5	17.0
40°-50°	432.7	17.5
50°-60°	397.8	16.1
60°-70°	316.7	12.8
70°-80°	193.5	7.8
80°-90°	42.1	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°	666.2	27.0
0°-40°	1084.7	44.0
0°-60°	1915.3	77.6
0°-90°	2467.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2467.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	853	855	861	864	866	81
15°	806	815	830	842	846	227
25°	719	737	766	787	794	331
35°	606	631	673	708	719	378
45°	477	511	567	612	628	369
55°	350	389	452	504	521	313
65°	228	267	329	375	391	226
75°	116	150	193	227	234	123
85°	27	33	34	29	27	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	862.0	862.0	862.0	862.0	862.0
2.5°	857.3	858.4	862.0	864.3	864.3
5°	852.6	854.9	860.8	864.3	865.5
7.5°	845.6	849.1	857.3	862.0	863.1
10°	835.0	839.7	850.2	857.3	859.6
12.5°	822.1	829.2	842.0	851.4	853.8
15°	805.7	815.1	830.3	842.0	845.6
17.5°	787.0	798.7	817.5	831.5	836.2
20°	767.1	778.8	802.2	818.6	824.5
22.5°	743.7	758.9	785.8	804.6	809.3
25°	719.1	736.6	765.9	787.0	794.0
27.5°	692.1	713.2	744.8	770.6	776.5
30°	664.0	686.3	722.6	750.7	757.7
32.5°	634.8	660.5	699.2	730.8	740.2
35°	605.5	631.2	673.4	708.5	719.1
37.5°	571.5	602.0	648.8	685.1	698.0
40°	542.2	571.5	621.9	661.7	674.6
42.5°	509.4	541.1	593.8	637.1	652.3
45°	476.7	510.6	566.8	612.5	627.7
47.5°	446.2	480.2	538.7	586.7	602.0
50°	414.6	449.7	510.6	559.8	575.0
52.5°	380.6	419.3	482.5	531.7	549.3
55°	350.2	388.8	452.1	503.6	521.2
57.5°	318.5	358.4	424.0	473.1	489.5
60°	289.3	327.9	392.3	440.3	459.1
62.5°	257.7	297.5	360.7	407.6	425.1
65°	228.4	267.0	329.1	374.8	391.2
67.5°	199.1	237.7	296.3	339.6	358.4
70°	169.8	208.5	262.3	304.5	320.9
72.5°	144.0	178.0	229.5	268.2	283.4
75°	115.9	149.9	193.2	227.2	234.2
77.5°	90.2	120.6	156.9	172.2	174.5
80°	66.8	90.2	114.8	118.3	118.3
82.5°	44.5	62.1	71.4	72.6	71.4
85°	26.9	32.8	34.0	29.3	26.9
87.5°	9.4	9.4	5.9	3.5	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)