

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: P388295

Luminaire Tested: **22CZ2-39VHE-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: P388295  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-39VHE-UNV-L930-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

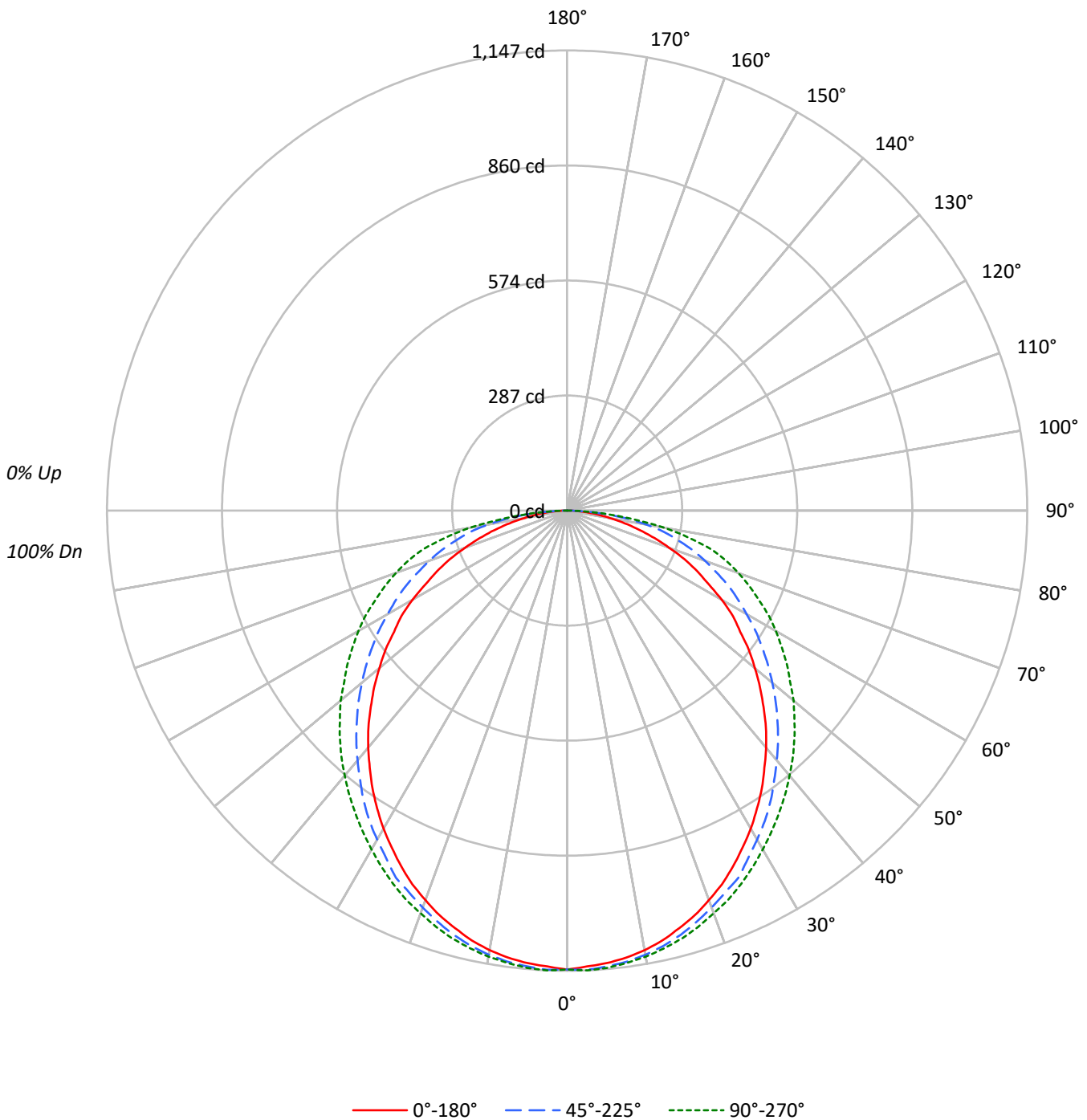
Lumens per Lamp: N/A  
Luminaire Lumens: 3364.6 lumens  
Efficiency: N/A  
Efficacy: 117.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 28.6  
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25

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

	0°	45°	90°
0°	3078	3078	3078
5°	3059	3081	3090
10°	3040	3072	3085
15°	3003	3049	3076
20°	2958	3015	3058
25°	2905	2999	3048
30°	2845	2943	3030
35°	2779	2904	3024
40°	2710	2856	3030
45°	2633	2823	3049
50°	2557	2793	3084
55°	2470	2781	3138
60°	2397	2780	3235
65°	2277	2825	3352
70°	2124	2879	3569
75°	1945	2978	3856
80°	1694	3104	3797
85°	1482	2760	3017



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.2	3.2
10°-20°	308.2	9.2
20°-30°	462.6	13.7
30°-40°	552.8	16.4
40°-50°	574.8	17.1
50°-60°	532.8	15.8
60°-70°	437.0	13.0
70°-80°	295.4	8.8
80°-90°	92.8	2.8
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°	879.0	26.1
0°-40°	1431.8	42.6
0°-60°	2539.4	75.5
0°-90°	3364.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3364.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1144	1144	1144	1144	1144	
5°	1132	1134	1141	1142	1144	107
15°	1078	1083	1094	1101	1104	304
25°	978	987	1010	1022	1026	451
35°	846	858	884	911	920	529
45°	692	705	742	785	801	534
55°	526	543	593	646	669	473
65°	358	378	444	502	526	353
75°	187	218	286	344	371	198
85°	48	66	89	99	98	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1144.0	1144.0	1144.0	1144.0	1144.0
2.5°	1137.4	1140.7	1145.7	1147.3	1147.3
5°	1132.4	1134.1	1140.7	1142.4	1144.0
7.5°	1124.2	1127.5	1134.1	1135.7	1137.4
10°	1112.6	1115.9	1124.2	1127.5	1129.1
12.5°	1097.7	1101.0	1110.9	1115.9	1117.5
15°	1077.8	1082.8	1094.4	1101.0	1104.3
17.5°	1057.9	1062.9	1074.5	1084.4	1087.7
20°	1033.1	1044.7	1053.0	1066.2	1067.9
22.5°	1008.3	1014.9	1029.8	1043.0	1049.7
25°	978.5	986.7	1009.9	1021.5	1026.5
27.5°	947.0	958.6	976.8	995.0	1001.6
30°	915.6	923.8	947.0	968.5	975.2
32.5°	880.8	892.4	917.2	938.7	948.7
35°	846.0	857.6	884.1	910.6	920.5
37.5°	807.9	821.2	847.7	879.1	892.4
40°	771.5	781.4	812.9	851.0	862.6
42.5°	733.4	745.0	778.1	819.5	832.8
45°	692.0	705.3	741.7	784.8	801.3
47.5°	652.3	665.6	705.3	748.3	768.2
50°	610.9	627.5	667.2	716.9	736.7
52.5°	571.2	586.1	630.8	682.1	700.3
55°	526.5	543.0	592.7	645.7	668.9
57.5°	490.1	501.6	556.3	610.9	634.1
60°	445.4	460.3	516.6	574.5	601.0
62.5°	397.3	422.2	480.1	539.7	566.2
65°	357.6	377.5	443.7	501.6	526.5
67.5°	316.2	337.7	402.3	463.6	491.7
70°	269.9	298.0	365.9	427.1	453.6
72.5°	228.5	258.3	327.8	387.4	415.6
75°	187.1	218.5	286.4	344.4	370.9
77.5°	147.3	182.1	248.3	293.0	309.6
80°	109.3	142.4	200.3	231.8	245.0
82.5°	76.2	104.3	147.3	163.9	167.2
85°	48.0	66.2	89.4	99.3	97.7
87.5°	21.5	26.5	33.1	36.4	34.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)