

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: P388298

Luminaire Tested: **22CZ2-39VHE-UNV-L935-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: P388298  
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-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

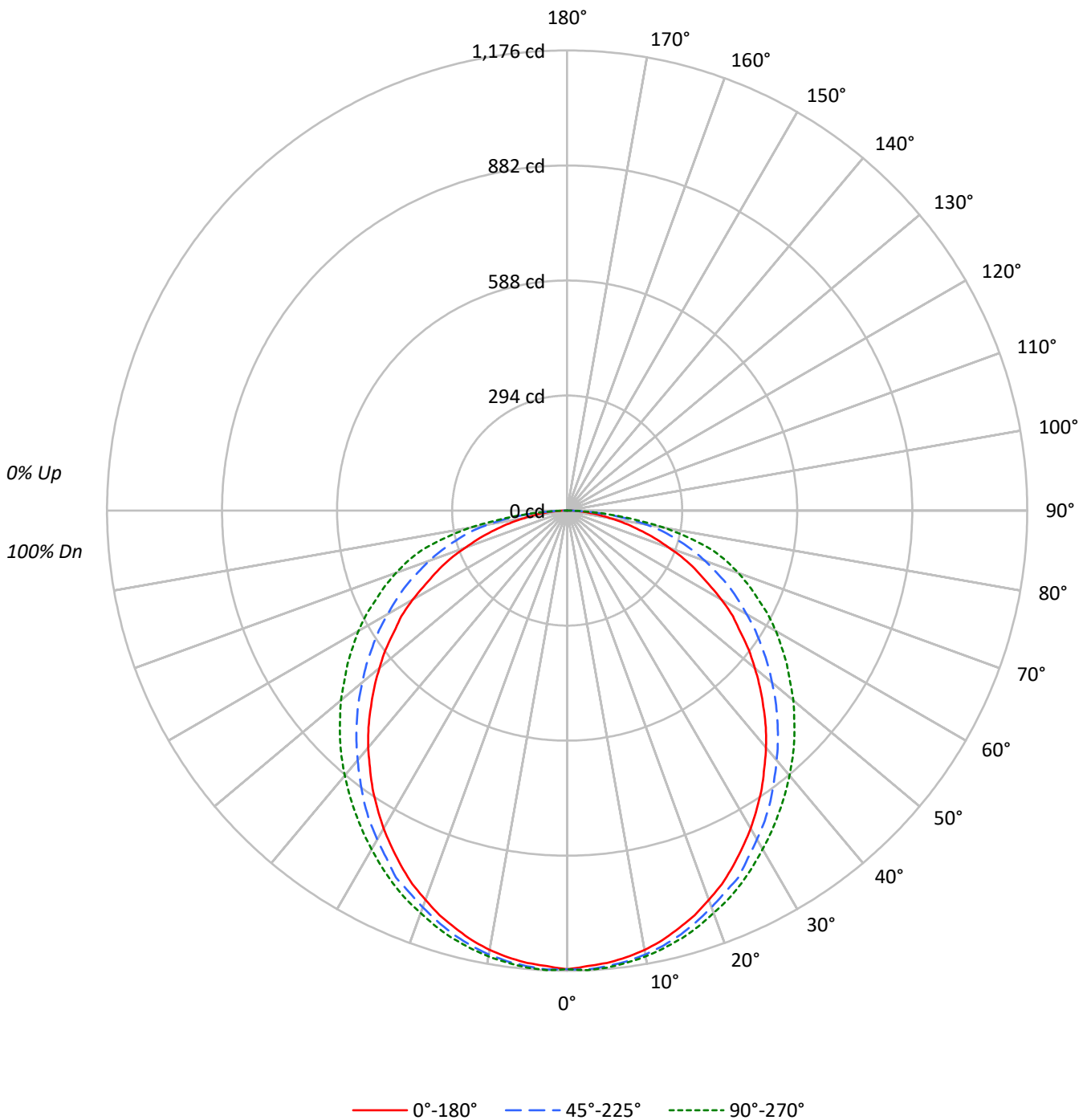
Lumens per Lamp: N/A  
Luminaire Lumens: 3447.9 lumens  
Efficiency: N/A  
Efficacy: 120.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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	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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	3155	3155	3155
5°	3135	3158	3167
10°	3115	3148	3162
15°	3077	3124	3153
20°	3032	3090	3134
25°	2977	3073	3123
30°	2915	3016	3105
35°	2848	2976	3099
40°	2777	2926	3105
45°	2699	2893	3125
50°	2621	2862	3161
55°	2531	2850	3216
60°	2456	2849	3315
65°	2334	2895	3435
70°	2175	2950	3658
75°	1993	3052	3951
80°	1736	3181	3891
85°	1519	2828	3091



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.9	3.2
10°-20°	315.8	9.2
20°-30°	474.1	13.7
30°-40°	566.5	16.4
40°-50°	589.1	17.1
50°-60°	546.0	15.8
60°-70°	447.8	13.0
70°-80°	302.7	8.8
80°-90°	95.1	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°	900.7	26.1
0°-40°	1467.2	42.6
0°-60°	2602.2	75.5
0°-90°	3447.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3447.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1172	1172	1172	1172	1172	
5°	1160	1162	1169	1171	1172	110
15°	1104	1110	1122	1128	1132	312
25°	1003	1011	1035	1047	1052	462
35°	867	879	906	933	943	542
45°	709	723	760	804	821	548
55°	540	556	607	662	685	485
65°	366	387	455	514	540	362
75°	192	224	294	353	380	203
85°	49	68	92	102	100	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1172.3	1172.3	1172.3	1172.3	1172.3
2.5°	1165.6	1169.0	1174.0	1175.7	1175.7
5°	1160.5	1162.2	1169.0	1170.7	1172.3
7.5°	1152.0	1155.4	1162.2	1163.9	1165.6
10°	1140.1	1143.5	1152.0	1155.4	1157.1
12.5°	1124.8	1128.2	1138.4	1143.5	1145.2
15°	1104.5	1109.6	1121.5	1128.2	1131.6
17.5°	1084.1	1089.2	1101.1	1111.3	1114.7
20°	1058.7	1070.6	1079.0	1092.6	1094.3
22.5°	1033.2	1040.0	1055.3	1068.9	1075.6
25°	1002.7	1011.2	1034.9	1046.8	1051.9
27.5°	970.5	982.3	1001.0	1019.7	1026.4
30°	938.2	946.7	970.5	992.5	999.3
32.5°	902.6	914.5	939.9	962.0	972.2
35°	867.0	878.8	906.0	933.1	943.3
37.5°	827.9	841.5	868.7	900.9	914.5
40°	790.6	800.8	833.0	872.1	883.9
42.5°	751.6	763.5	797.4	839.8	853.4
45°	709.2	722.8	760.1	804.2	821.2
47.5°	668.5	682.0	722.8	766.9	787.2
50°	626.0	643.0	683.7	734.6	755.0
52.5°	585.3	600.6	646.4	699.0	717.7
55°	539.5	556.5	607.4	661.7	685.4
57.5°	502.2	514.1	570.1	626.0	649.8
60°	456.4	471.7	529.3	588.7	615.9
62.5°	407.2	432.6	492.0	553.1	580.2
65°	366.5	386.8	454.7	514.1	539.5
67.5°	324.1	346.1	412.3	475.0	503.9
70°	276.5	305.4	374.9	437.7	464.9
72.5°	234.1	264.7	335.9	397.0	425.8
75°	191.7	224.0	293.5	352.9	380.0
77.5°	151.0	186.6	254.5	300.3	317.3
80°	112.0	145.9	205.3	237.5	251.1
82.5°	78.0	106.9	151.0	168.0	171.4
85°	49.2	67.9	91.6	101.8	100.1
87.5°	22.1	27.1	33.9	37.3	35.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)