

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: P387963

Luminaire Tested: **22CZ2-39VHE-SQR-UNV-L935-CD1-SDWPD1-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: P387963  
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: 22CZ2-39VHE-SQR-UNV-L935-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3230.7 lumens  
Efficiency: N/A  
Efficacy: 113.0 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

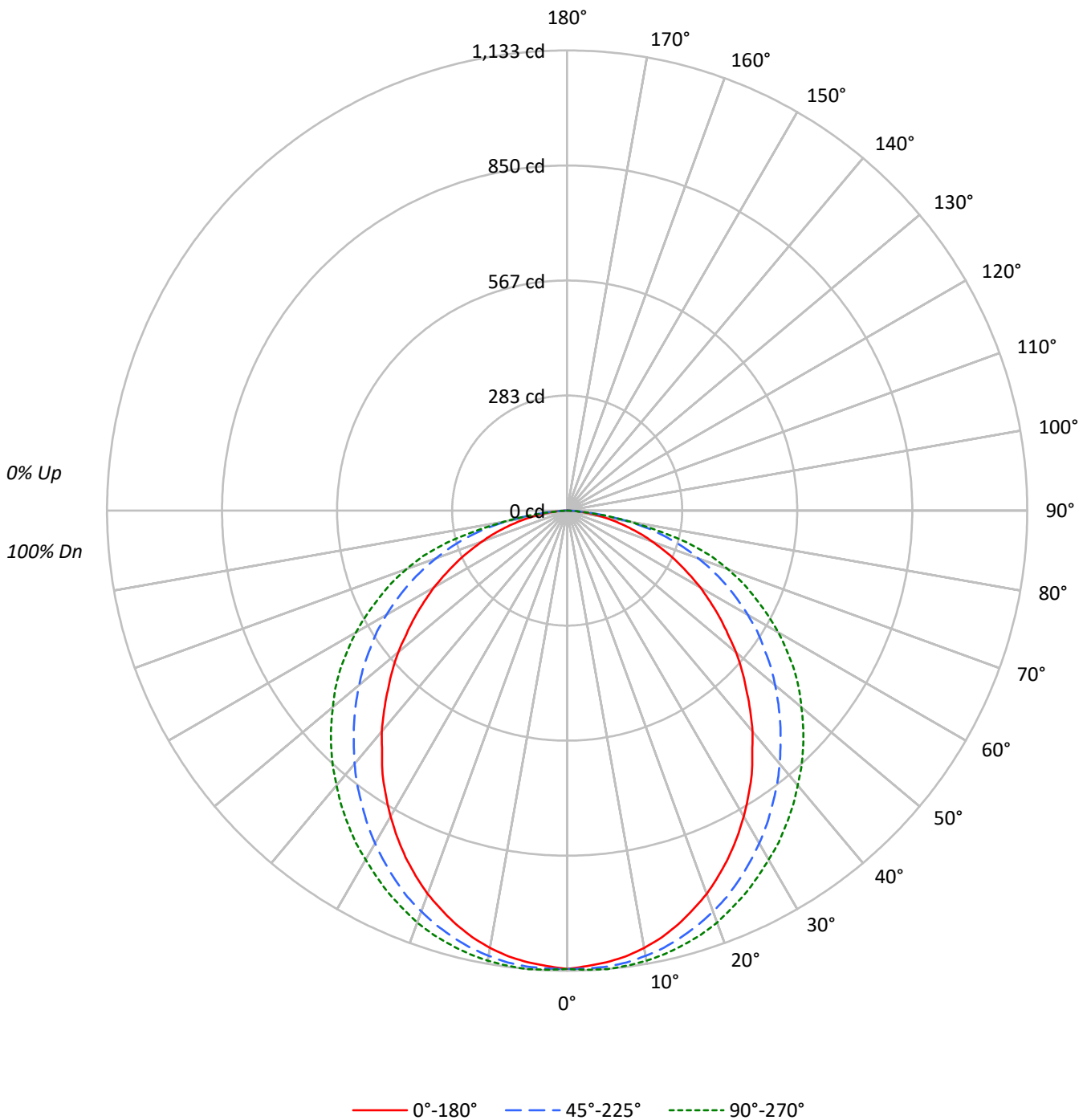
Input Watts (W): 28.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	3037	3037	3037
5°	3015	3044	3061
10°	2987	3042	3075
15°	2939	3029	3084
20°	2876	3008	3091
25°	2795	2977	3087
30°	2701	2940	3083
35°	2604	2896	3093
40°	2494	2860	3103
45°	2375	2825	3128
50°	2272	2799	3152
55°	2151	2777	3202
60°	2038	2765	3235
65°	1904	2744	3261
70°	1749	2703	3305
75°	1578	2630	3189
80°	1354	2329	2400
85°	1090	1374	1090



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.0	3.3
10°-20°	305.9	9.5
20°-30°	459.4	14.2
30°-40°	547.9	17.0
40°-50°	566.5	17.5
50°-60°	520.9	16.1
60°-70°	414.6	12.8
70°-80°	253.3	7.8
80°-90°	55.1	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°	872.3	27.0
0°-40°	1420.3	44.0
0°-60°	2507.7	77.6
0°-90°	3230.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3230.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1129	1129	1129	1129	1129	
5°	1116	1119	1127	1132	1133	106
15°	1055	1067	1087	1102	1107	297
25°	942	964	1003	1030	1040	433
35°	793	826	882	928	942	495
45°	624	668	742	802	822	483
55°	458	509	592	659	682	410
65°	299	350	431	491	512	296
75°	152	196	253	298	307	162
85°	35	43	44	38	35	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1128.6	1128.6	1128.6	1128.6	1128.6
2.5°	1122.4	1124.0	1128.6	1131.6	1131.6
5°	1116.3	1119.4	1127.0	1131.6	1133.2
7.5°	1107.1	1111.7	1122.4	1128.6	1130.1
10°	1093.3	1099.4	1113.2	1122.4	1125.5
12.5°	1076.4	1085.6	1102.5	1114.8	1117.8
15°	1055.0	1067.2	1087.2	1102.5	1107.1
17.5°	1030.4	1045.8	1070.3	1088.7	1094.8
20°	1004.4	1019.7	1050.4	1071.8	1079.5
22.5°	973.7	993.6	1028.9	1053.4	1059.6
25°	941.5	964.5	1002.8	1030.4	1039.6
27.5°	906.2	933.8	975.2	1009.0	1016.6
30°	869.4	898.6	946.1	982.9	992.1
32.5°	831.1	864.8	915.4	956.8	969.1
35°	792.8	826.5	881.7	927.7	941.5
37.5°	748.3	788.2	849.5	897.0	913.9
40°	710.0	748.3	814.2	866.4	883.2
42.5°	667.0	708.4	777.4	834.2	854.1
45°	624.1	668.5	742.2	802.0	821.9
47.5°	584.2	628.7	705.4	768.2	788.2
50°	542.8	588.8	668.5	733.0	752.9
52.5°	498.3	548.9	631.7	696.2	719.2
55°	458.5	509.1	591.9	659.3	682.4
57.5°	417.1	469.2	555.1	619.5	640.9
60°	378.7	429.3	513.7	576.5	601.1
62.5°	337.3	389.5	472.3	533.6	556.6
65°	299.0	349.6	430.9	490.7	512.1
67.5°	260.7	311.3	387.9	444.7	469.2
70°	222.3	272.9	343.5	398.7	420.1
72.5°	188.6	233.1	300.5	351.1	371.1
75°	151.8	196.3	253.0	297.5	306.7
77.5°	118.1	157.9	205.5	225.4	228.5
80°	87.4	118.1	150.3	154.9	154.9
82.5°	58.3	81.3	93.5	95.1	93.5
85°	35.3	42.9	44.5	38.3	35.3
87.5°	12.3	12.3	7.7	4.6	1.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)