

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: P388294

Luminaire Tested: **22CZ2-39VHE-UNV-L930-CD1-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: P388294  
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-SWPD1-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: 3322.9 lumens  
Efficiency: N/A  
Efficacy: 116.2 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

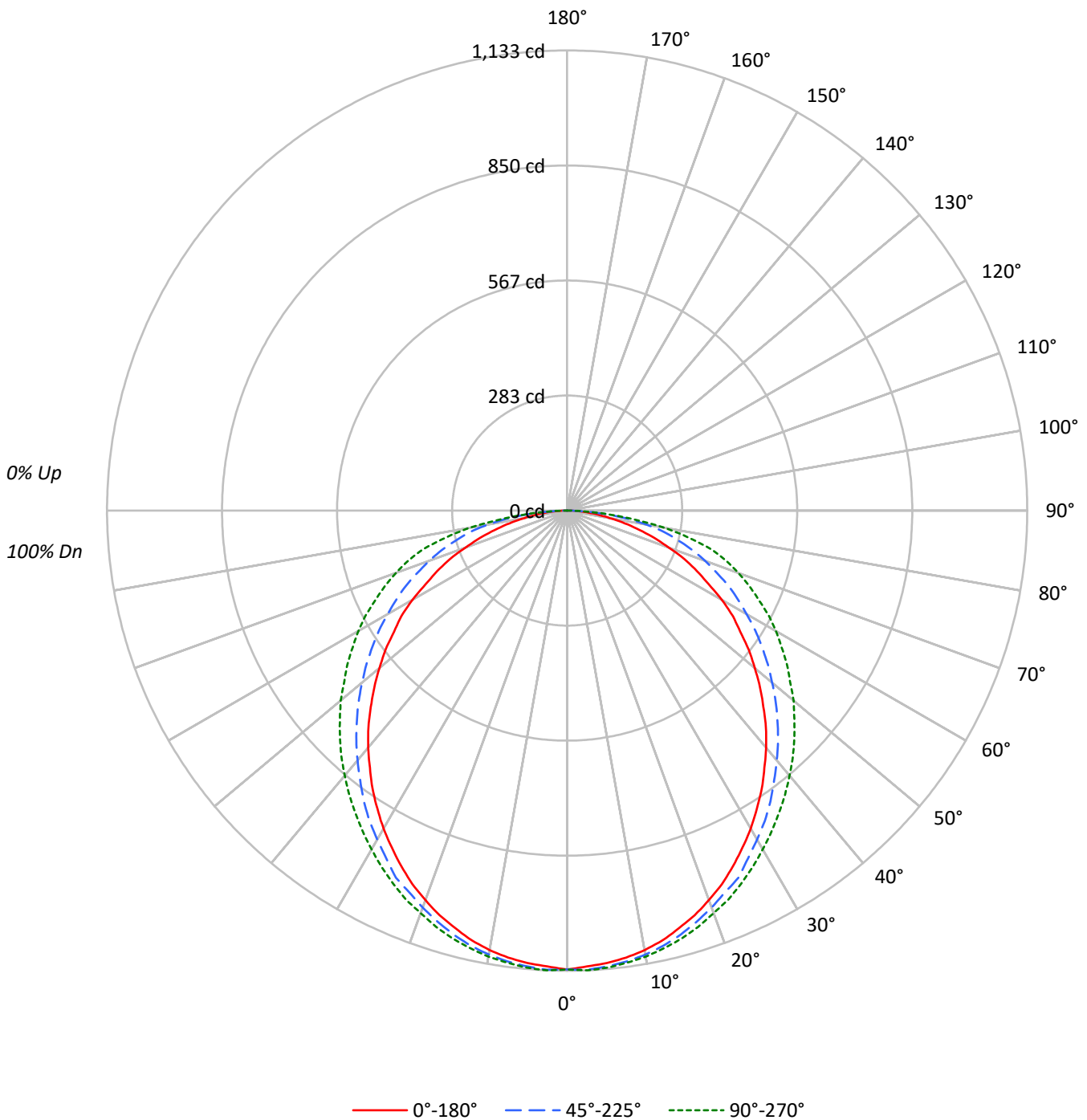
Input Watts (W): 28.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3040	3040	3040
5°	3021	3043	3052
10°	3002	3034	3047
15°	2965	3011	3038
20°	2922	2978	3020
25°	2869	2961	3010
30°	2810	2906	2993
35°	2745	2868	2986
40°	2677	2820	2993
45°	2601	2788	3012
50°	2526	2758	3046
55°	2440	2746	3099
60°	2367	2745	3194
65°	2249	2790	3311
70°	2097	2843	3525
75°	1921	2941	3808
80°	1672	3065	3750
85°	1463	2726	2979



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.9	3.2
10°-20°	304.3	9.2
20°-30°	456.9	13.7
30°-40°	545.9	16.4
40°-50°	567.7	17.1
50°-60°	526.2	15.8
60°-70°	431.6	13.0
70°-80°	291.8	8.8
80°-90°	91.7	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°	868.1	26.1
0°-40°	1414.0	42.6
0°-60°	2507.9	75.5
0°-90°	3322.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3322.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1130	1130	1130	1130	1130	
5°	1118	1120	1127	1128	1130	106
15°	1064	1069	1081	1087	1091	300
25°	966	974	997	1009	1014	445
35°	836	847	873	899	909	522
45°	684	696	732	775	791	528
55°	520	536	585	638	661	467
65°	353	373	438	495	520	349
75°	185	216	283	340	366	196
85°	47	65	88	98	96	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1129.8	1129.8	1129.8	1129.8	1129.8
2.5°	1123.3	1126.6	1131.5	1133.1	1133.1
5°	1118.4	1120.0	1126.6	1128.2	1129.8
7.5°	1110.2	1113.5	1120.0	1121.7	1123.3
10°	1098.8	1102.1	1110.2	1113.5	1115.1
12.5°	1084.1	1087.3	1097.1	1102.1	1103.7
15°	1064.4	1069.3	1080.8	1087.3	1090.6
17.5°	1044.8	1049.7	1061.2	1071.0	1074.3
20°	1020.3	1031.7	1039.9	1053.0	1054.6
22.5°	995.8	1002.3	1017.0	1030.1	1036.6
25°	966.3	974.5	997.4	1008.9	1013.8
27.5°	935.3	946.7	964.7	982.7	989.2
30°	904.2	912.4	935.3	956.5	963.1
32.5°	869.9	881.3	905.8	927.1	936.9
35°	835.5	847.0	873.1	899.3	909.1
37.5°	797.9	811.0	837.2	868.2	881.3
40°	762.0	771.8	802.8	840.4	851.9
42.5°	724.3	735.8	768.5	809.4	822.5
45°	683.5	696.5	732.5	775.0	791.4
47.5°	644.2	657.3	696.5	739.1	758.7
50°	603.3	619.7	658.9	708.0	727.6
52.5°	564.1	578.8	623.0	673.7	691.6
55°	520.0	536.3	585.4	637.7	660.6
57.5°	484.0	495.4	549.4	603.3	626.2
60°	439.8	454.6	510.1	567.4	593.5
62.5°	392.4	416.9	474.2	533.0	559.2
65°	353.2	372.8	438.2	495.4	520.0
67.5°	312.3	333.6	397.3	457.8	485.6
70°	266.5	294.3	361.4	421.9	448.0
72.5°	225.6	255.1	323.7	382.6	410.4
75°	184.8	215.8	282.9	340.1	366.3
77.5°	145.5	179.9	245.3	289.4	305.8
80°	107.9	140.6	197.8	228.9	242.0
82.5°	75.2	103.0	145.5	161.9	165.1
85°	47.4	65.4	88.3	98.1	96.5
87.5°	21.3	26.2	32.7	36.0	34.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)