

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: P387919

Luminaire Tested: **22CZ2-39-SQR-UNV-L940-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: P387919  
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: 22CZ2-39-SQR-UNV-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3194.6 lumens  
Efficiency: N/A  
Efficacy: 92.6 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

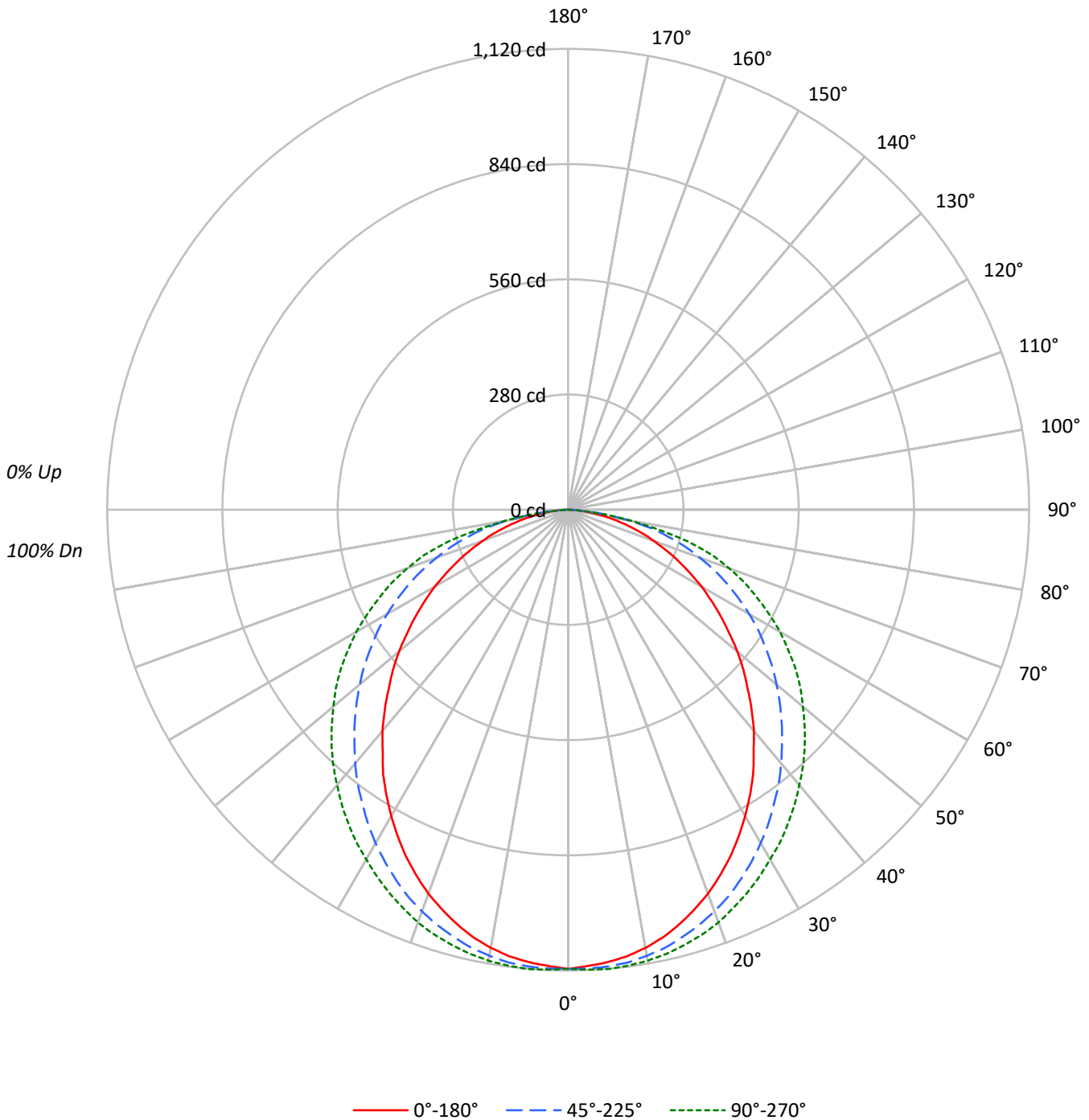
Input Watts (W): 34.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3003	3003	3003
5°	2982	3010	3027
10°	2954	3008	3041
15°	2906	2995	3050
20°	2844	2974	3057
25°	2764	2944	3052
30°	2671	2907	3048
35°	2575	2864	3058
40°	2466	2828	3068
45°	2348	2793	3093
50°	2247	2768	3117
55°	2127	2746	3165
60°	2016	2733	3199
65°	1883	2713	3224
70°	1730	2672	3268
75°	1561	2601	3152
80°	1339	2303	2373
85°	1078	1359	1078



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.8	3.3
10°-20°	302.5	9.5
20°-30°	454.3	14.2
30°-40°	541.8	17.0
40°-50°	560.2	17.5
50°-60°	515.0	16.1
60°-70°	410.0	12.8
70°-80°	250.5	7.8
80°-90°	54.5	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°	862.6	27.0
0°-40°	1404.4	44.0
0°-60°	2479.6	77.6
0°-90°	3194.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3194.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1104	1107	1114	1119	1120	105
15°	1043	1055	1075	1090	1095	294
25°	931	954	992	1019	1028	428
35°	784	817	872	917	931	489
45°	617	661	734	793	813	477
55°	453	503	585	652	675	406
65°	296	346	426	485	506	293
75°	150	194	250	294	303	160
85°	35	42	44	38	35	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1116.0	1116.0	1116.0	1116.0	1116.0
2.5°	1109.9	1111.4	1116.0	1119.0	1119.0
5°	1103.8	1106.9	1114.4	1119.0	1120.5
7.5°	1094.7	1099.3	1109.9	1116.0	1117.5
10°	1081.1	1087.1	1100.8	1109.9	1112.9
12.5°	1064.4	1073.5	1090.2	1102.3	1105.3
15°	1043.2	1055.3	1075.0	1090.2	1094.7
17.5°	1018.9	1034.1	1058.3	1076.5	1082.6
20°	993.1	1008.3	1038.6	1059.8	1067.4
22.5°	962.8	982.5	1017.4	1041.7	1047.7
25°	931.0	953.7	991.6	1018.9	1028.0
27.5°	896.1	923.4	964.3	997.7	1005.3
30°	859.7	888.5	935.5	971.9	981.0
32.5°	821.8	855.2	905.2	946.1	958.3
35°	783.9	817.3	871.8	917.3	931.0
37.5°	739.9	779.3	840.0	887.0	903.7
40°	702.0	739.9	805.1	856.7	873.4
42.5°	659.6	700.5	768.7	824.8	844.5
45°	617.1	661.1	733.9	793.0	812.7
47.5°	577.7	621.7	697.5	759.6	779.3
50°	536.7	582.2	661.1	724.8	744.5
52.5°	492.8	542.8	624.7	688.4	711.1
55°	453.4	503.4	585.3	652.0	674.7
57.5°	412.4	464.0	548.9	612.6	633.8
60°	374.5	424.5	507.9	570.1	594.4
62.5°	333.6	385.1	467.0	527.7	550.4
65°	295.7	345.7	426.1	485.2	506.4
67.5°	257.8	307.8	383.6	439.7	464.0
70°	219.9	269.9	339.6	394.2	415.4
72.5°	186.5	230.5	297.2	347.2	366.9
75°	150.1	194.1	250.2	294.2	303.2
77.5°	116.8	156.2	203.2	222.9	225.9
80°	86.4	116.8	148.6	153.1	153.1
82.5°	57.6	80.4	92.5	94.0	92.5
85°	34.9	42.5	44.0	37.9	34.9
87.5°	12.1	12.1	7.6	4.5	1.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)