

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: P387917

Luminaire Tested: **22CZ2-39-SQR-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: P387917  
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-L935-CD1-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: 3201.7 lumens  
Efficiency: N/A  
Efficacy: 92.8 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

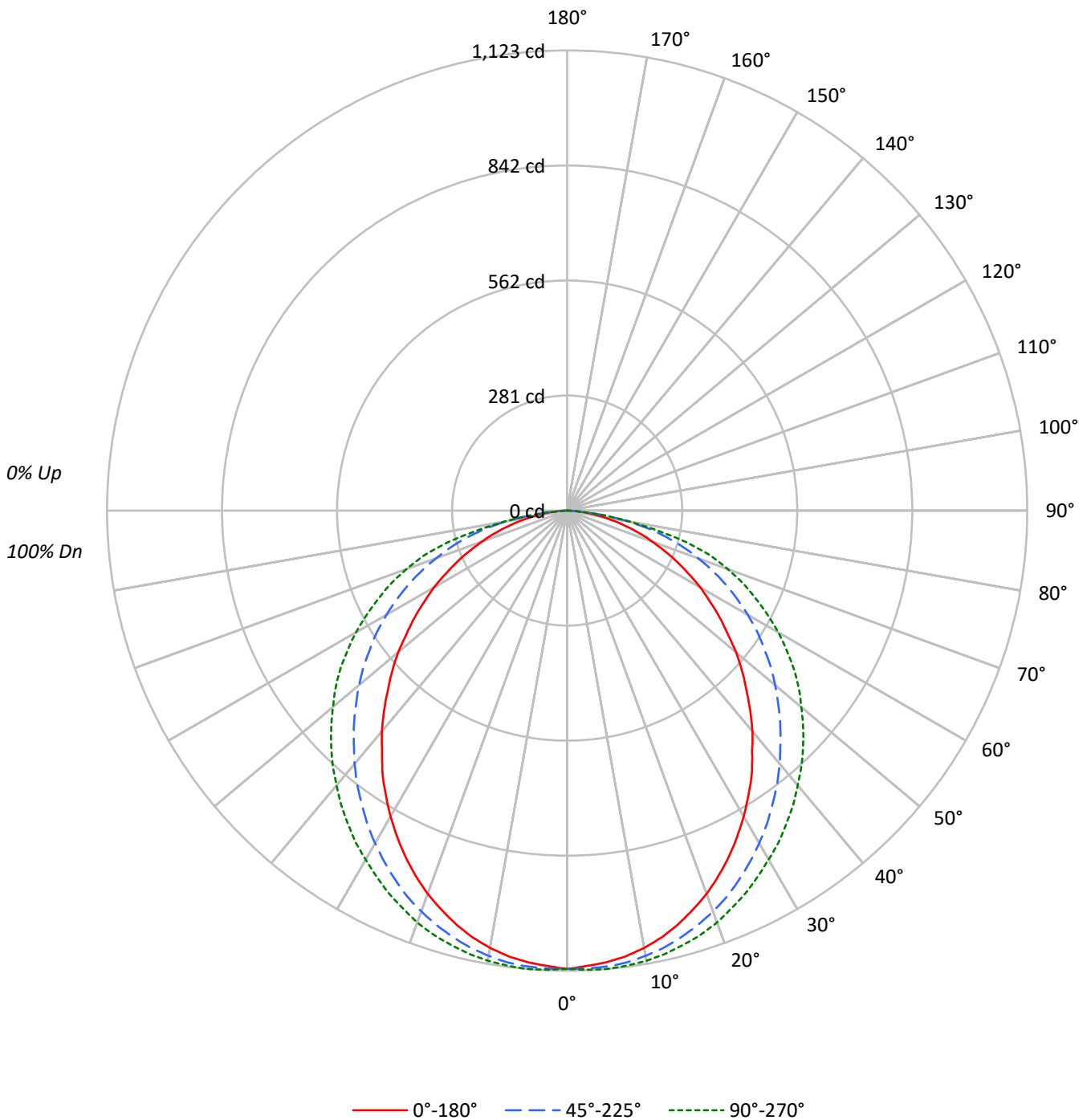
Input Watts (W): 34.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3010	3010	3010
5°	2988	3017	3034
10°	2961	3014	3048
15°	2913	3002	3057
20°	2850	2981	3064
25°	2770	2951	3059
30°	2677	2913	3055
35°	2581	2871	3065
40°	2472	2834	3075
45°	2354	2799	3100
50°	2252	2774	3123
55°	2132	2752	3172
60°	2020	2740	3206
65°	1887	2719	3231
70°	1733	2678	3276
75°	1564	2607	3160
80°	1342	2307	2379
85°	1081	1362	1081



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.0	3.3
10°-20°	303.2	9.5
20°-30°	455.3	14.2
30°-40°	543.0	17.0
40°-50°	561.4	17.5
50°-60°	516.2	16.1
60°-70°	410.9	12.8
70°-80°	251.0	7.8
80°-90°	54.6	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°	864.5	27.0
0°-40°	1407.5	44.0
0°-60°	2485.1	77.6
0°-90°	3201.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3201.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1118	1118	1118	1118	1118	
5°	1106	1109	1117	1122	1123	105
15°	1046	1058	1077	1093	1097	294
25°	933	956	994	1021	1030	429
35°	786	819	874	919	933	490
45°	618	662	736	795	814	478
55°	454	504	587	653	676	406
65°	296	346	427	486	508	294
75°	150	194	251	295	304	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°	1118.4	1118.4	1118.4	1118.4	1118.4
2.5°	1112.4	1113.9	1118.4	1121.5	1121.5
5°	1106.3	1109.3	1116.9	1121.5	1123.0
7.5°	1097.2	1101.7	1112.4	1118.4	1120.0
10°	1083.5	1089.6	1103.2	1112.4	1115.4
12.5°	1066.8	1075.9	1092.6	1104.8	1107.8
15°	1045.5	1057.6	1077.4	1092.6	1097.2
17.5°	1021.2	1036.4	1060.7	1078.9	1085.0
20°	995.3	1010.5	1040.9	1062.2	1069.8
22.5°	965.0	984.7	1019.7	1044.0	1050.0
25°	933.0	955.8	993.8	1021.2	1030.3
27.5°	898.1	925.4	966.5	999.9	1007.5
30°	861.6	890.5	937.6	974.1	983.2
32.5°	823.6	857.1	907.2	948.2	960.4
35°	785.6	819.1	873.8	919.4	933.0
37.5°	741.6	781.1	841.9	889.0	905.7
40°	703.6	741.6	806.9	858.6	875.3
42.5°	661.0	702.1	770.4	826.7	846.4
45°	618.5	662.5	735.5	794.8	814.5
47.5°	579.0	623.0	699.0	761.3	781.1
50°	537.9	583.5	662.5	726.4	746.1
52.5°	493.9	544.0	626.1	689.9	712.7
55°	454.4	504.5	586.6	653.4	676.2
57.5°	413.3	465.0	550.1	613.9	635.2
60°	375.3	425.5	509.1	571.4	595.7
62.5°	334.3	386.0	468.0	528.8	551.6
65°	296.3	346.5	427.0	486.3	507.5
67.5°	258.3	308.5	384.5	440.7	465.0
70°	220.3	270.5	340.4	395.1	416.4
72.5°	186.9	231.0	297.8	348.0	367.7
75°	150.4	194.5	250.7	294.8	303.9
77.5°	117.0	156.5	203.6	223.4	226.4
80°	86.6	117.0	148.9	153.5	153.5
82.5°	57.7	80.5	92.7	94.2	92.7
85°	35.0	42.5	44.1	38.0	35.0
87.5°	12.2	12.2	7.6	4.6	1.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)