

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: P387817

Luminaire Tested: **22CZ2-29VHE-SQR-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: P387817  
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: 22CZ2-29VHE-SQR-UNV-L930-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2436.9 lumens  
Efficiency: N/A  
Efficacy: 112.3 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

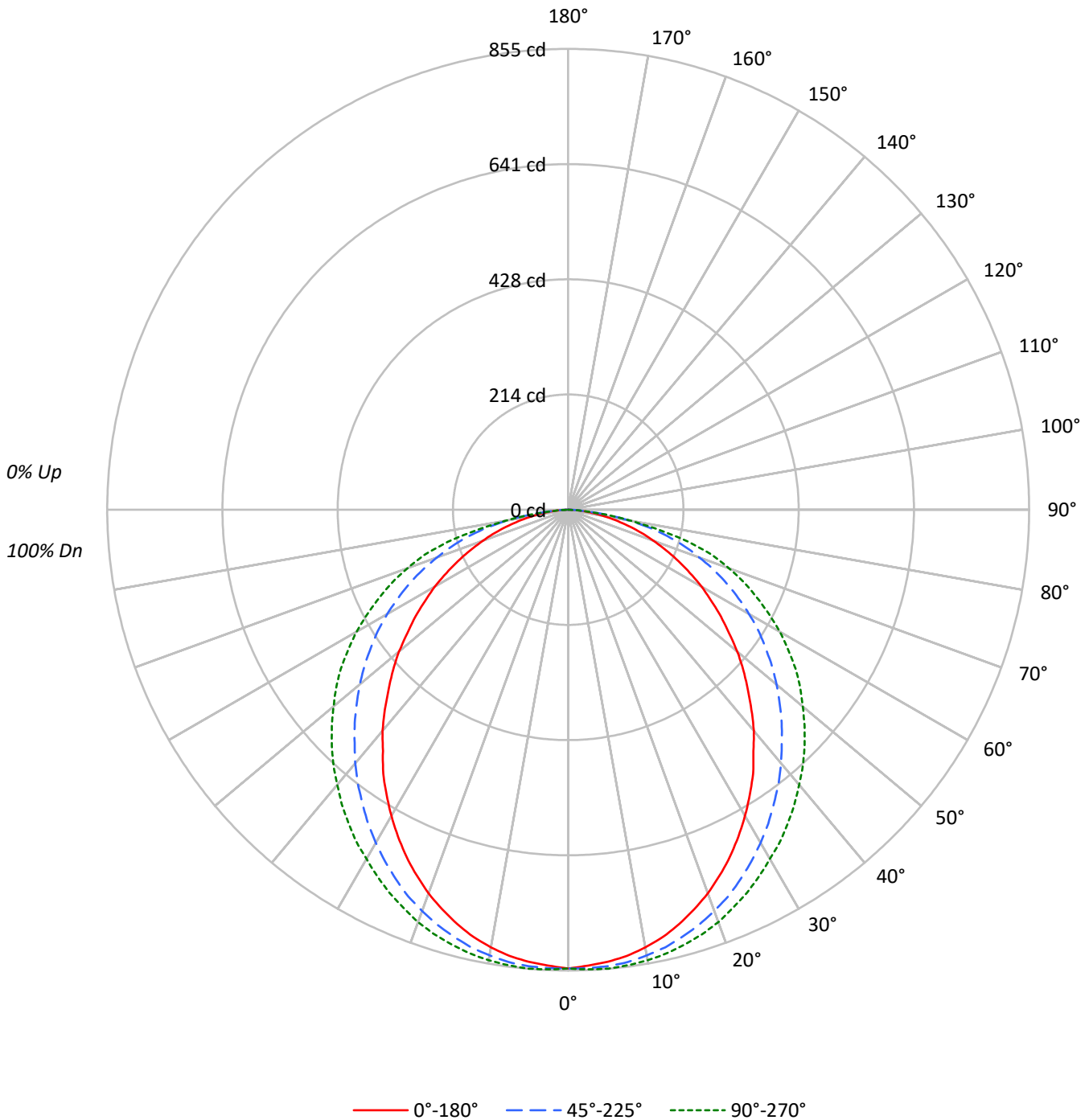
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P387817

CATALOG NUMBER: 22CZ2-29VHE-SQR-UNV-L930-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P387817

CATALOG NUMBER: 22CZ2-29VHE-SQR-UNV-L930-CD1-SWPD1-U

**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°	2291	2291	2291
5°	2274	2296	2309
10°	2253	2294	2320
15°	2217	2284	2327
20°	2170	2269	2332
25°	2109	2246	2328
30°	2038	2217	2325
35°	1964	2185	2333
40°	1881	2158	2340
45°	1791	2130	2359
50°	1714	2111	2377
55°	1622	2095	2415
60°	1538	2086	2440
65°	1436	2069	2460
70°	1319	2039	2493
75°	1190	1984	2405
80°	1021	1756	1810
85°	821	1034	821



TEST NUMBER: P387817

CATALOG NUMBER: 22CZ2-29VHE-SQR-UNV-L930-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.7	3.3
10°-20°	230.7	9.5
20°-30°	346.6	14.2
30°-40°	413.3	17.0
40°-50°	427.3	17.5
50°-60°	392.9	16.1
60°-70°	312.8	12.8
70°-80°	191.1	7.8
80°-90°	41.5	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°	658.0	27.0
0°-40°	1071.3	44.0
0°-60°	1891.5	77.6
0°-90°	2436.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2436.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	851	851	851	851	851	
5°	842	844	850	854	855	80
15°	796	805	820	832	835	224
25°	710	728	756	777	784	327
35°	598	623	665	700	710	373
45°	471	504	560	605	620	364
55°	346	384	446	497	515	309
65°	226	264	325	370	386	223
75°	114	148	191	224	231	122
85°	27	32	34	29	27	31
90°	0	0	0	0	0	



TEST NUMBER: P387817

CATALOG NUMBER: 22CZ2-29VHE-SQR-UNV-L930-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	851.3	851.3	851.3	851.3	851.3
2.5°	846.6	847.8	851.3	853.6	853.6
5°	842.0	844.3	850.1	853.6	854.7
7.5°	835.1	838.5	846.6	851.3	852.4
10°	824.7	829.3	839.7	846.6	849.0
12.5°	811.9	818.9	831.6	840.9	843.2
15°	795.8	805.0	820.0	831.6	835.1
17.5°	777.2	788.8	807.3	821.2	825.8
20°	757.6	769.1	792.3	808.5	814.3
22.5°	734.4	749.5	776.1	794.6	799.2
25°	710.2	727.5	756.4	777.2	784.2
27.5°	683.6	704.4	735.6	761.1	766.8
30°	655.8	677.8	713.6	741.4	748.3
32.5°	626.9	652.3	690.5	721.7	731.0
35°	598.0	623.4	665.1	699.8	710.2
37.5°	564.4	594.5	640.8	676.6	689.3
40°	535.5	564.4	614.2	653.5	666.2
42.5°	503.1	534.4	586.4	629.2	644.2
45°	470.7	504.3	559.8	604.9	619.9
47.5°	440.7	474.2	532.0	579.5	594.5
50°	409.4	444.1	504.3	552.9	567.9
52.5°	375.9	414.1	476.5	525.1	542.5
55°	345.8	384.0	446.5	497.3	514.7
57.5°	314.6	353.9	418.7	467.3	483.5
60°	285.7	323.9	387.5	434.9	453.4
62.5°	254.5	293.8	356.2	402.5	419.9
65°	225.5	263.7	325.0	370.1	386.3
67.5°	196.6	234.8	292.6	335.4	353.9
70°	167.7	205.9	259.1	300.7	316.9
72.5°	142.3	175.8	226.7	264.9	279.9
75°	114.5	148.0	190.8	224.4	231.3
77.5°	89.1	119.1	155.0	170.0	172.3
80°	65.9	89.1	113.3	116.8	116.8
82.5°	44.0	61.3	70.6	71.7	70.6
85°	26.6	32.4	33.5	28.9	26.6
87.5°	9.3	9.3	5.8	3.5	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)