

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: P390309

Luminaire Tested: **22CZ2-39VHE-HRP-UNV-L930-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: P390309  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-39VHE-HRP-UNV-L930-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2786.6 lumens  
Efficiency: N/A  
Efficacy: 97.4 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

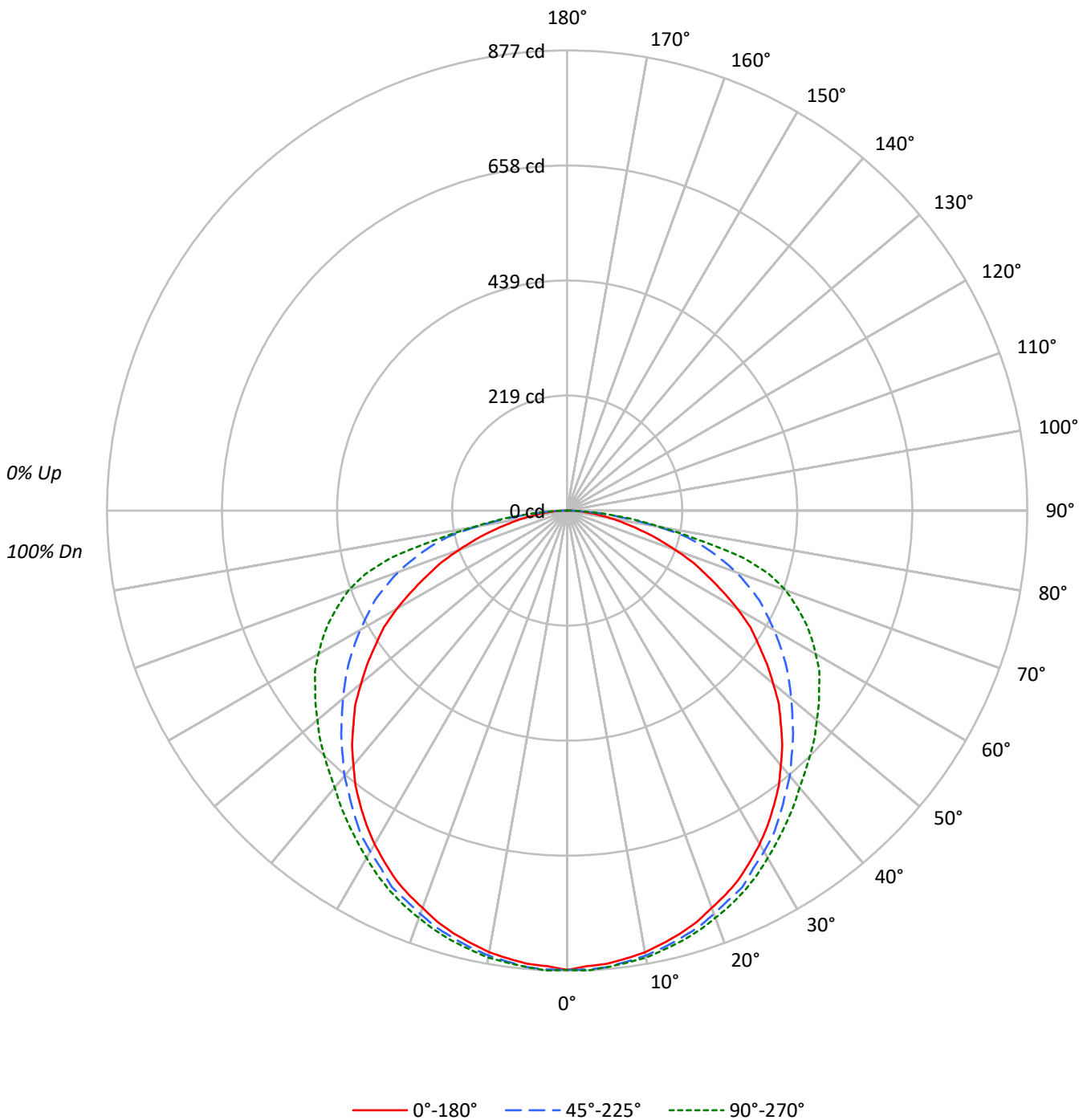
Input Watts (W): 28.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P390309

CATALOG NUMBER: 22CZ2-39VHE-HRP-UNV-L930-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P390309

CATALOG NUMBER: 22CZ2-39VHE-HRP-UNV-L930-CD1-SDWPD1-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	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2355	2355	2355
5°	2342	2359	2359
10°	2336	2353	2364
15°	2324	2347	2364
20°	2307	2342	2366
25°	2301	2350	2374
30°	2280	2331	2376
35°	2256	2323	2391
40°	2225	2319	2420
45°	2192	2317	2496
50°	2146	2334	2600
55°	2087	2385	2751
60°	2019	2449	2946
65°	1880	2571	3185
70°	1725	2693	3484
75°	1513	2834	3602
80°	1302	2700	2827
85°	1139	1961	2152



TEST NUMBER: P390309

CATALOG NUMBER: 22CZ2-39VHE-HRP-UNV-L930-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.8	3.0
10°-20°	237.7	8.5
20°-30°	362.7	13.0
30°-40°	442.9	15.9
40°-50°	473.5	17.0
50°-60°	457.1	16.4
60°-70°	393.4	14.1
70°-80°	266.2	9.6
80°-90°	70.2	2.5
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°	683.2	24.5
0°-40°	1126.1	40.4
0°-60°	2056.7	73.8
0°-90°	2786.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2786.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	867	869	873	873	873	82
15°	834	836	842	847	849	235
25°	775	779	791	795	800	357
35°	687	693	707	722	728	430
45°	576	586	609	640	656	445
55°	445	459	508	560	586	399
65°	295	324	404	467	500	294
75°	146	193	273	328	346	156
85°	37	51	64	66	70	42
90°	0	0	0	0	0	



TEST NUMBER: P390309

CATALOG NUMBER: 22CZ2-39VHE-HRP-UNV-L930-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	875.3	875.3	875.3	875.3	875.3
2.5°	869.2	871.2	875.3	875.3	877.4
5°	867.1	869.2	873.3	873.3	873.3
7.5°	861.0	863.0	867.1	869.2	869.2
10°	854.8	856.9	861.0	863.0	865.1
12.5°	844.6	846.6	852.8	856.9	856.9
15°	834.3	836.4	842.5	846.6	848.7
17.5°	822.0	826.1	832.3	836.4	838.4
20°	805.6	809.7	817.9	824.1	826.1
22.5°	791.3	795.4	803.6	809.7	813.8
25°	774.9	779.0	791.3	795.4	799.5
27.5°	754.4	758.5	768.7	776.9	783.1
30°	733.9	738.0	750.3	760.5	764.6
32.5°	711.3	717.5	731.8	740.0	746.2
35°	686.7	692.9	707.2	721.6	727.7
37.5°	662.1	668.3	682.6	701.1	709.3
40°	633.4	641.6	660.1	684.7	688.8
42.5°	606.8	617.0	633.4	662.1	672.4
45°	576.0	586.3	608.8	639.6	656.0
47.5°	547.3	557.6	582.2	619.1	639.6
50°	512.5	526.8	557.6	600.6	621.1
52.5°	479.7	492.0	533.0	580.1	604.7
55°	444.8	459.2	508.4	559.6	586.3
57.5°	414.1	426.4	481.7	539.1	569.9
60°	375.1	391.5	455.1	516.6	547.3
62.5°	334.1	358.7	428.4	492.0	524.8
65°	295.2	323.9	403.8	467.4	500.2
67.5°	260.3	291.1	373.1	440.7	471.5
70°	219.3	258.3	342.3	407.9	442.8
72.5°	182.4	225.5	307.5	373.1	403.8
75°	145.5	192.7	272.6	328.0	346.4
77.5°	112.7	157.8	233.7	250.1	252.1
80°	84.0	125.0	174.2	176.3	182.4
82.5°	57.4	88.1	112.7	123.0	125.0
85°	36.9	51.2	63.5	65.6	69.7
87.5°	16.4	18.4	22.5	20.5	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)