

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: P390310

Luminaire Tested: **22CZ2-39VHE-HRP-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: P390310  
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-SWPD1-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: 2820.6 lumens  
Efficiency: N/A  
Efficacy: 98.6 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

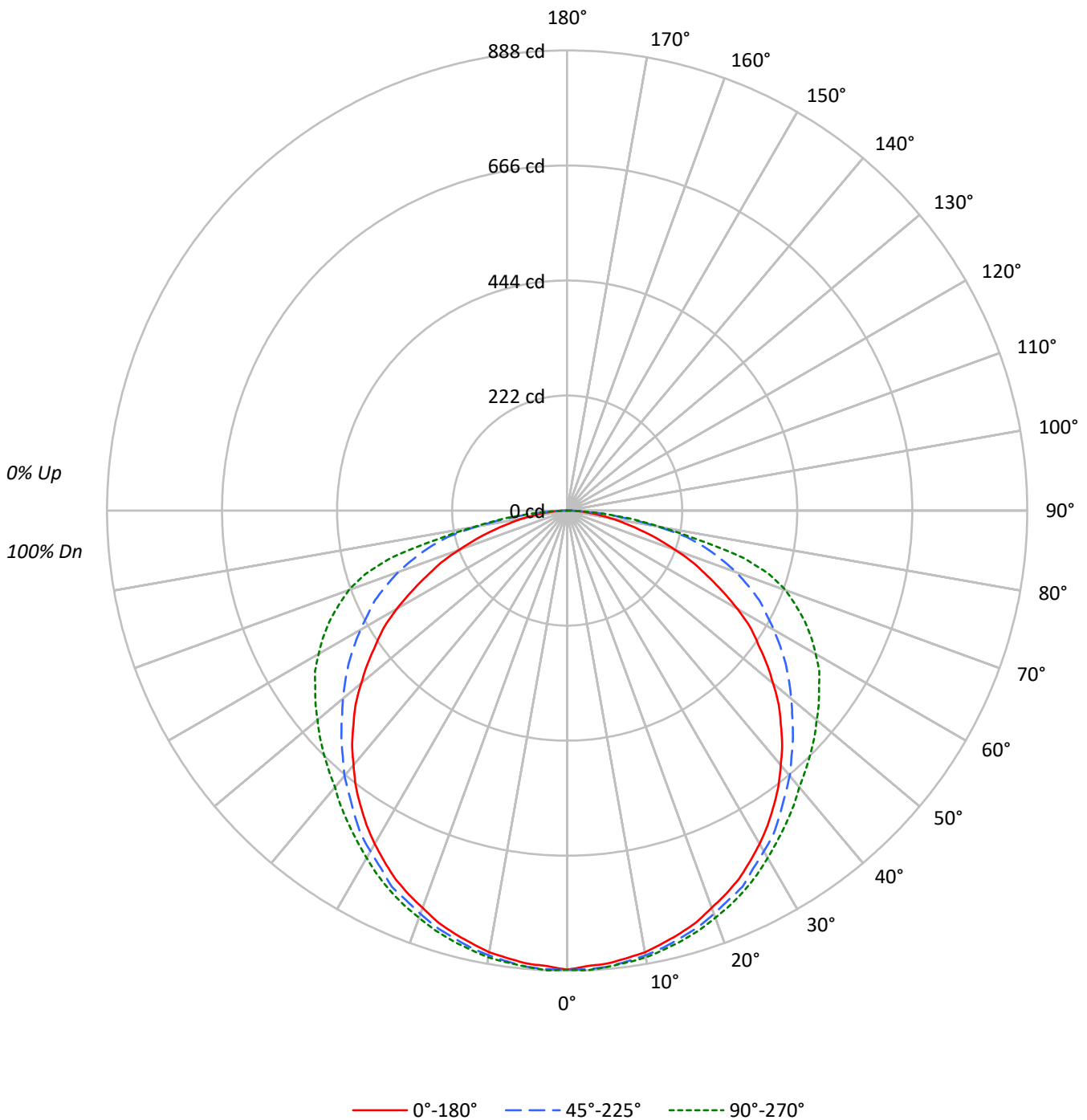
Input Watts (W): 28.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2384	2384	2384
5°	2371	2388	2388
10°	2364	2381	2393
15°	2353	2376	2393
20°	2335	2371	2395
25°	2329	2378	2403
30°	2308	2360	2405
35°	2283	2352	2420
40°	2252	2347	2449
45°	2219	2345	2527
50°	2171	2363	2632
55°	2113	2414	2784
60°	2044	2479	2982
65°	1903	2603	3224
70°	1747	2726	3526
75°	1531	2870	3646
80°	1319	2734	2862
85°	1152	1985	2177



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.8	3.0
10°-20°	240.6	8.5
20°-30°	367.1	13.0
30°-40°	448.3	15.9
40°-50°	479.3	17.0
50°-60°	462.6	16.4
60°-70°	398.2	14.1
70°-80°	269.4	9.6
80°-90°	71.1	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°	691.6	24.5
0°-40°	1139.9	40.4
0°-60°	2081.8	73.8
0°-90°	2820.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2820.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	886	886	886	886	886	
5°	878	880	884	884	884	83
15°	844	847	853	857	859	238
25°	784	788	801	805	809	361
35°	695	701	716	730	737	435
45°	583	593	616	647	664	450
55°	450	465	515	566	593	403
65°	299	328	409	473	506	297
75°	147	195	276	332	351	158
85°	37	52	64	66	70	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	886.0	886.0	886.0	886.0	886.0
2.5°	879.8	881.8	886.0	886.0	888.1
5°	877.7	879.8	883.9	883.9	883.9
7.5°	871.5	873.5	877.7	879.8	879.8
10°	865.3	867.3	871.5	873.5	875.6
12.5°	854.9	857.0	863.2	867.3	867.3
15°	844.5	846.6	852.8	857.0	859.0
17.5°	832.1	836.2	842.4	846.6	848.7
20°	815.5	819.6	827.9	834.1	836.2
22.5°	800.9	805.1	813.4	819.6	823.8
25°	784.3	788.5	800.9	805.1	809.2
27.5°	763.6	767.7	778.1	786.4	792.6
30°	742.8	747.0	759.4	769.8	774.0
32.5°	720.0	726.2	740.8	749.1	755.3
35°	695.1	701.3	715.9	730.4	736.6
37.5°	670.2	676.4	691.0	709.6	717.9
40°	641.2	649.5	668.1	693.0	697.2
42.5°	614.2	624.6	641.2	670.2	680.6
45°	583.1	593.4	616.3	647.4	664.0
47.5°	554.0	564.4	589.3	626.6	647.4
50°	518.7	533.3	564.4	608.0	628.7
52.5°	485.5	498.0	539.5	587.2	612.1
55°	450.3	464.8	514.6	566.5	593.4
57.5°	419.1	431.6	487.6	545.7	576.8
60°	379.7	396.3	460.6	522.9	554.0
62.5°	338.2	363.1	433.7	498.0	531.2
65°	298.8	327.8	408.8	473.1	506.3
67.5°	263.5	294.6	377.6	446.1	477.2
70°	222.0	261.4	346.5	412.9	448.2
72.5°	184.7	228.2	311.2	377.6	408.8
75°	147.3	195.0	276.0	332.0	350.7
77.5°	114.1	159.8	236.5	253.1	255.2
80°	85.1	126.6	176.4	178.4	184.7
82.5°	58.1	89.2	114.1	124.5	126.6
85°	37.3	51.9	64.3	66.4	70.5
87.5°	16.6	18.7	22.8	20.7	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)