

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: P390311

Luminaire Tested: **22CZ2-39VHE-HRP-UNV-L930-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: P390311
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-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: 2856.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

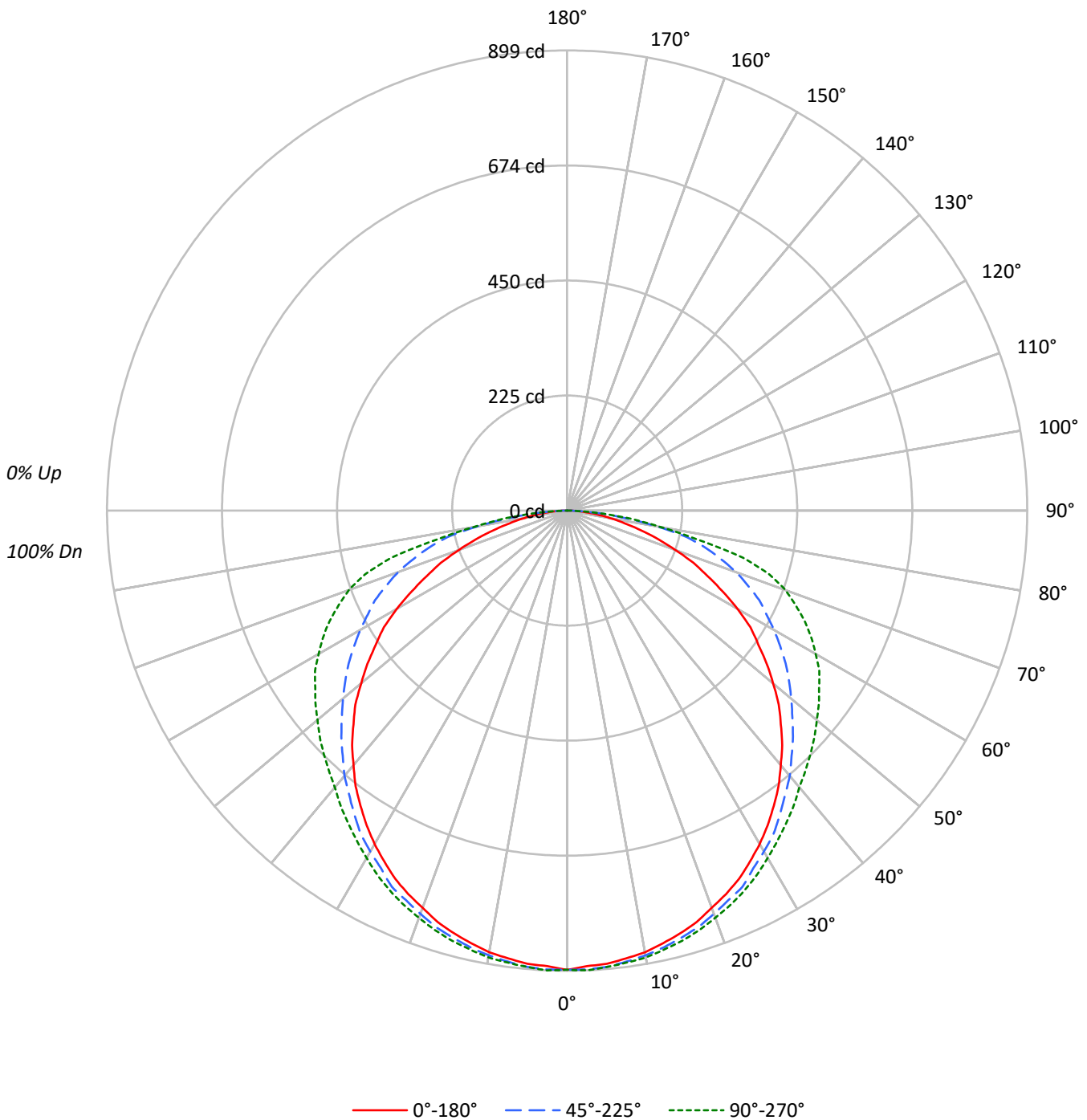
Input Watts (W): 28.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2414	2414	2414
5°	2401	2418	2418
10°	2394	2411	2423
15°	2382	2406	2423
20°	2365	2401	2425
25°	2358	2408	2433
30°	2337	2389	2435
35°	2312	2381	2450
40°	2281	2376	2480
45°	2247	2375	2559
50°	2199	2393	2665
55°	2139	2444	2819
60°	2069	2510	3019
65°	1926	2635	3264
70°	1769	2761	3570
75°	1551	2905	3692
80°	1334	2768	2898
85°	1167	2010	2205



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.9	3.0
10°-20°	243.7	8.5
20°-30°	371.8	13.0
30°-40°	453.9	15.9
40°-50°	485.3	17.0
50°-60°	468.4	16.4
60°-70°	403.2	14.1
70°-80°	272.8	9.6
80°-90°	72.0	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°	700.3	24.5
0°-40°	1154.2	40.4
0°-60°	2107.9	73.8
0°-90°	2856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2856.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	897	897	897	897	897	
5°	889	891	895	895	895	84
15°	855	857	864	868	870	241
25°	794	798	811	815	819	366
35°	704	710	725	740	746	440
45°	590	601	624	656	672	456
55°	456	471	521	574	601	409
65°	302	332	414	479	513	301
75°	149	198	279	336	355	160
85°	38	52	65	67	71	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	897.1	897.1	897.1	897.1	897.1
2.5°	890.8	892.9	897.1	897.1	899.2
5°	888.7	890.8	895.0	895.0	895.0
7.5°	882.4	884.5	888.7	890.8	890.8
10°	876.1	878.2	882.4	884.5	886.6
12.5°	865.6	867.7	874.0	878.2	878.2
15°	855.1	857.2	863.5	867.7	869.8
17.5°	842.5	846.7	853.0	857.2	859.3
20°	825.7	829.9	838.3	844.6	846.7
22.5°	811.0	815.2	823.6	829.9	834.1
25°	794.2	798.4	811.0	815.2	819.4
27.5°	773.2	777.4	787.9	796.3	802.6
30°	752.2	756.4	769.0	779.5	783.7
32.5°	729.0	735.3	750.1	758.5	764.8
35°	703.8	710.1	724.8	739.5	745.8
37.5°	678.6	684.9	699.6	718.5	726.9
40°	649.2	657.6	676.5	701.7	705.9
42.5°	621.9	632.4	649.2	678.6	689.1
45°	590.4	600.9	624.0	655.5	672.3
47.5°	561.0	571.5	596.7	634.5	655.5
50°	525.2	540.0	571.5	615.6	636.6
52.5°	491.6	504.2	546.3	594.6	619.8
55°	455.9	470.6	521.0	573.6	600.9
57.5°	424.4	437.0	493.7	552.6	584.1
60°	384.5	401.3	466.4	529.4	561.0
62.5°	342.5	367.7	439.1	504.2	537.9
65°	302.5	332.0	413.9	479.0	512.6
67.5°	266.8	298.3	382.4	451.7	483.2
70°	224.8	264.7	350.9	418.1	453.8
72.5°	187.0	231.1	315.1	382.4	413.9
75°	149.2	197.5	279.4	336.2	355.1
77.5°	115.6	161.8	239.5	256.3	258.4
80°	86.1	128.2	178.6	180.7	187.0
82.5°	58.8	90.3	115.6	126.1	128.2
85°	37.8	52.5	65.1	67.2	71.4
87.5°	16.8	18.9	23.1	21.0	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)