

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: P388251

Luminaire Tested: **22CZ2-29VHE-UNV-L940-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: P388251  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29VHE-UNV-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2595.4 lumens  
Efficiency: N/A  
Efficacy: 119.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

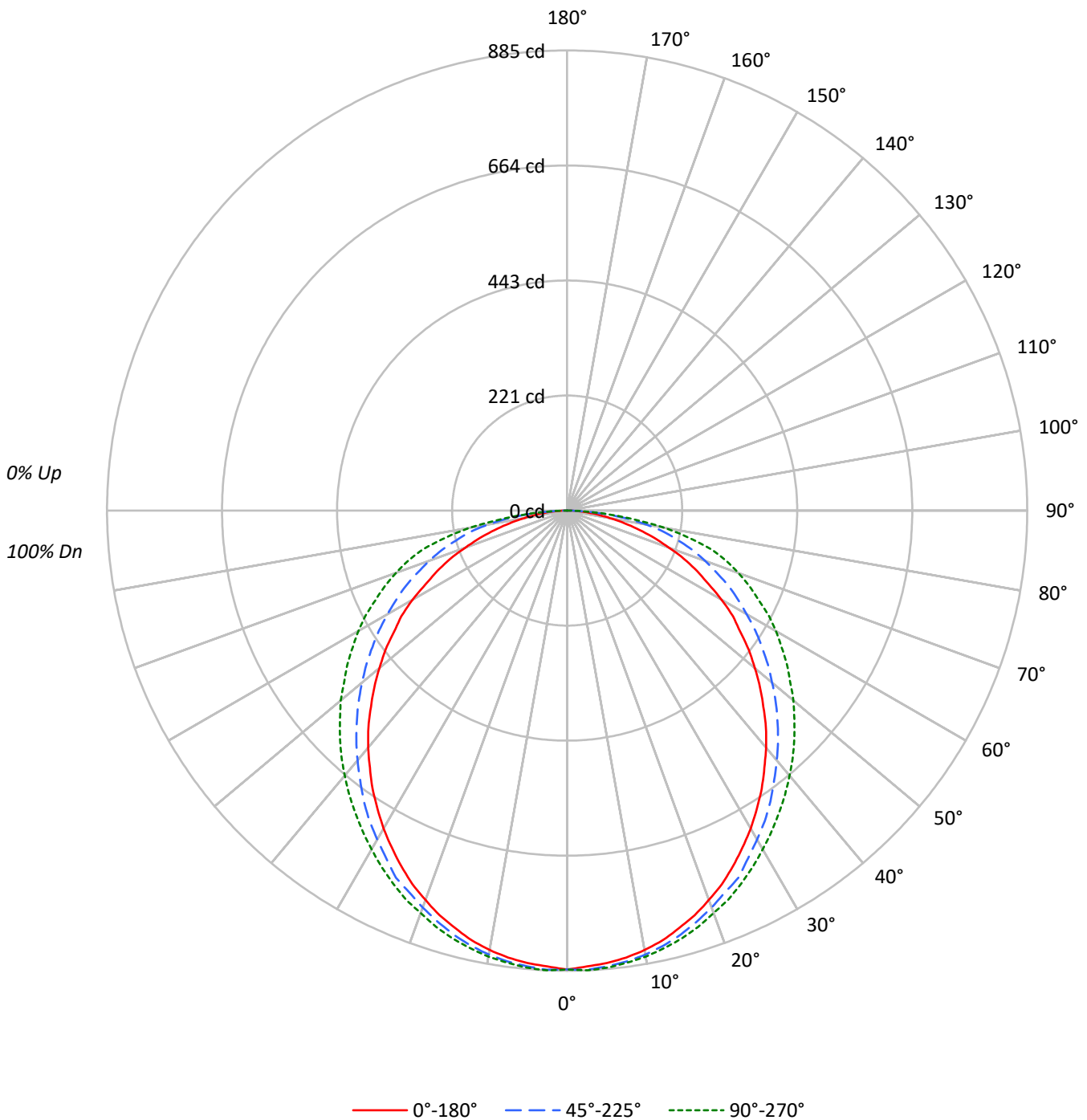
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	2375	2375	2375
5°	2360	2377	2384
10°	2345	2370	2380
15°	2316	2352	2373
20°	2282	2326	2359
25°	2241	2313	2351
30°	2194	2270	2337
35°	2144	2240	2333
40°	2090	2203	2337
45°	2031	2177	2352
50°	1973	2155	2379
55°	1905	2145	2421
60°	1849	2145	2495
65°	1757	2180	2586
70°	1638	2220	2753
75°	1500	2297	2975
80°	1306	2394	2929
85°	1142	2130	2325



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.5	3.2
10°-20°	237.7	9.2
20°-30°	356.9	13.7
30°-40°	426.4	16.4
40°-50°	443.4	17.1
50°-60°	411.0	15.8
60°-70°	337.1	13.0
70°-80°	227.9	8.8
80°-90°	71.6	2.8
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°	678.0	26.1
0°-40°	1104.4	42.6
0°-60°	1958.8	75.5
0°-90°	2595.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2595.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	882	882	882	882	882	
5°	874	875	880	881	882	83
15°	831	835	844	849	852	235
25°	755	761	779	788	792	348
35°	653	662	682	702	710	408
45°	534	544	572	605	618	412
55°	406	419	457	498	516	365
65°	276	291	342	387	406	273
75°	144	169	221	266	286	153
85°	37	51	69	77	75	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	882.5	882.5	882.5	882.5	882.5
2.5°	877.4	879.9	883.8	885.0	885.0
5°	873.5	874.8	879.9	881.2	882.5
7.5°	867.2	869.7	874.8	876.1	877.4
10°	858.2	860.8	867.2	869.7	871.0
12.5°	846.7	849.3	856.9	860.8	862.1
15°	831.4	835.2	844.2	849.3	851.8
17.5°	816.1	819.9	828.8	836.5	839.1
20°	796.9	805.9	812.2	822.5	823.7
22.5°	777.8	782.9	794.4	804.6	809.7
25°	754.8	761.2	779.0	788.0	791.8
27.5°	730.5	739.4	753.5	767.5	772.7
30°	706.2	712.6	730.5	747.1	752.2
32.5°	679.4	688.4	707.5	724.1	731.8
35°	652.6	661.5	682.0	702.4	710.1
37.5°	623.2	633.4	653.9	678.1	688.4
40°	595.1	602.8	627.1	656.4	665.4
42.5°	565.8	574.7	600.2	632.2	642.4
45°	533.8	544.0	572.1	605.4	618.1
47.5°	503.2	513.4	544.0	577.3	592.6
50°	471.3	484.0	514.7	553.0	568.3
52.5°	440.6	452.1	486.6	526.2	540.2
55°	406.1	418.9	457.2	498.1	516.0
57.5°	378.0	387.0	429.1	471.3	489.1
60°	343.5	355.0	398.5	443.2	463.6
62.5°	306.5	325.7	370.4	416.3	436.8
65°	275.9	291.2	342.3	387.0	406.1
67.5°	243.9	260.5	310.3	357.6	379.3
70°	208.2	229.9	282.2	329.5	349.9
72.5°	176.2	199.2	252.9	298.8	320.6
75°	144.3	168.6	220.9	265.6	286.1
77.5°	113.7	140.5	191.6	226.0	238.8
80°	84.3	109.8	154.5	178.8	189.0
82.5°	58.7	80.5	113.7	126.4	129.0
85°	37.0	51.1	69.0	76.6	75.3
87.5°	16.6	20.4	25.5	28.1	26.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)