

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: P388511

Luminaire Tested: **22CZ2-85VHE-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: P388511  
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: 22CZ2-85VHE-UNV-L930-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

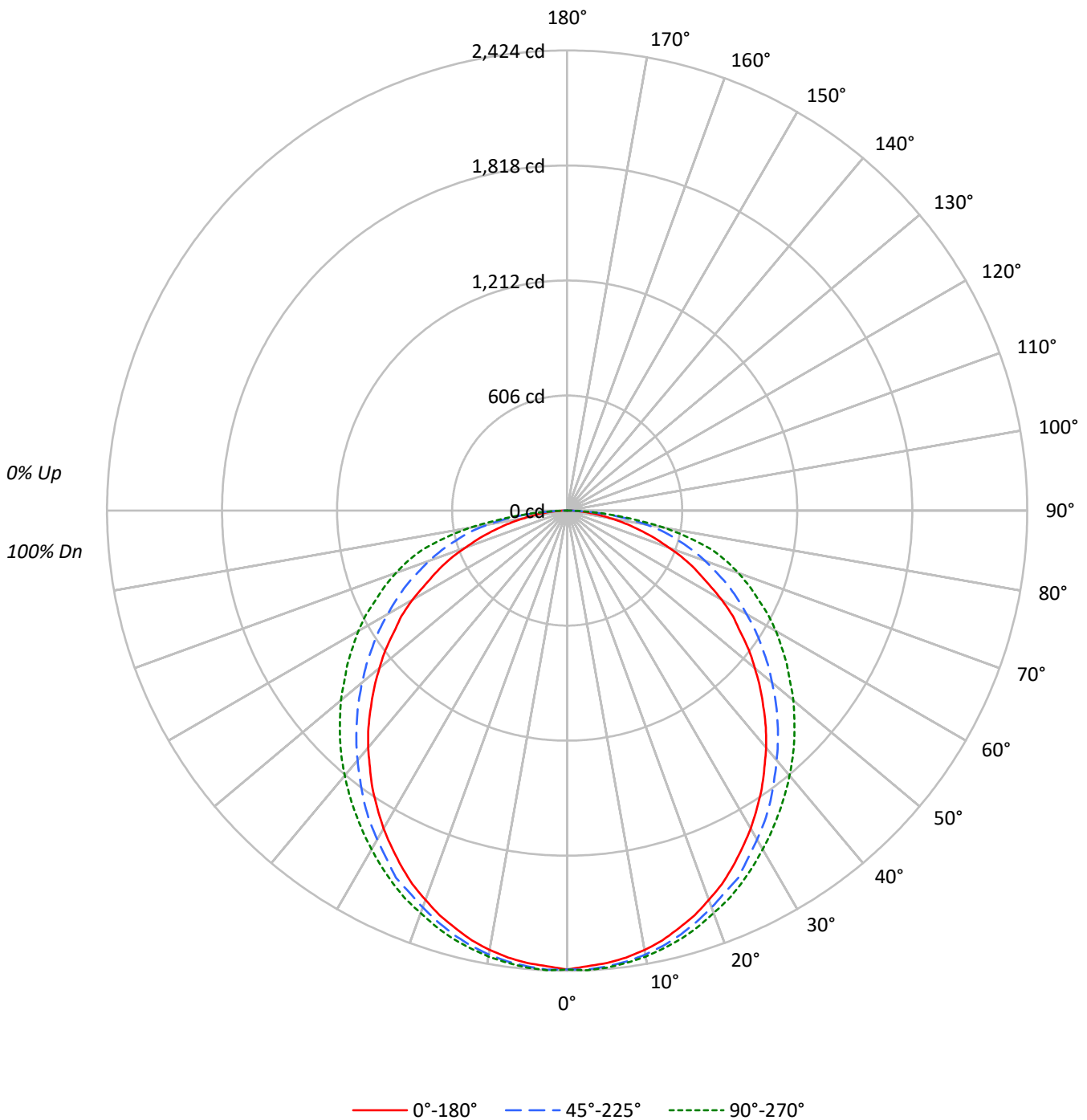
Lumens per Lamp: N/A  
Luminaire Lumens: 7108.0 lumens  
Efficiency: N/A  
Efficacy: 111.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 63.6  
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	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°	6504	6504	6504
5°	6462	6510	6529
10°	6422	6489	6518
15°	6343	6441	6499
20°	6250	6370	6460
25°	6138	6335	6439
30°	6010	6216	6401
35°	5871	6136	6388
40°	5726	6033	6401
45°	5564	5963	6442
50°	5403	5901	6516
55°	5218	5874	6629
60°	5064	5873	6833
65°	4811	5969	7082
70°	4485	6082	7540
75°	4109	6291	8146
80°	3577	6558	8021
85°	3131	5832	6373



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	228.6	3.2
10°-20°	651.0	9.2
20°-30°	977.3	13.7
30°-40°	1167.8	16.4
40°-50°	1214.4	17.1
50°-60°	1125.5	15.8
60°-70°	923.2	13.0
70°-80°	624.1	8.8
80°-90°	196.1	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°	1856.9	26.1
0°-40°	3024.7	42.6
0°-60°	5364.6	75.5
0°-90°	7108.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7108.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2417	2417	2417	2417	2417	
5°	2392	2396	2410	2413	2417	227
15°	2277	2287	2312	2326	2333	642
25°	2067	2085	2134	2158	2168	952
35°	1787	1812	1868	1924	1945	1117
45°	1462	1490	1567	1658	1693	1129
55°	1112	1147	1252	1364	1413	1000
65°	756	798	937	1060	1112	747
75°	395	462	605	728	784	419
85°	101	140	189	210	206	115
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2416.9	2416.9	2416.9	2416.9	2416.9
2.5°	2402.9	2409.9	2420.3	2423.8	2423.8
5°	2392.4	2395.9	2409.9	2413.4	2416.9
7.5°	2374.9	2381.9	2395.9	2399.4	2402.9
10°	2350.4	2357.4	2374.9	2381.9	2385.4
12.5°	2318.9	2325.9	2346.9	2357.4	2360.9
15°	2276.9	2287.4	2311.9	2325.9	2332.9
17.5°	2235.0	2245.5	2270.0	2290.9	2297.9
20°	2182.5	2207.0	2224.5	2252.5	2256.0
22.5°	2130.0	2144.0	2175.5	2203.5	2217.5
25°	2067.1	2084.6	2133.5	2158.0	2168.5
27.5°	2000.6	2025.1	2063.6	2102.1	2116.1
30°	1934.2	1951.7	2000.6	2046.1	2060.1
32.5°	1860.7	1885.2	1937.7	1983.1	2004.1
35°	1787.3	1811.8	1867.7	1923.7	1944.7
37.5°	1706.8	1734.8	1790.8	1857.2	1885.2
40°	1629.9	1650.9	1717.3	1797.8	1822.3
42.5°	1549.4	1573.9	1643.9	1731.3	1759.3
45°	1462.0	1490.0	1566.9	1657.9	1692.8
47.5°	1378.1	1406.0	1490.0	1580.9	1622.9
50°	1290.6	1325.6	1409.5	1514.5	1556.4
52.5°	1206.7	1238.2	1332.6	1441.0	1479.5
55°	1112.2	1147.2	1252.1	1364.1	1413.0
57.5°	1035.3	1059.8	1175.2	1290.6	1339.6
60°	940.9	972.3	1091.3	1213.7	1269.6
62.5°	839.4	891.9	1014.3	1140.2	1196.2
65°	755.5	797.5	937.4	1059.8	1112.2
67.5°	668.0	713.5	849.9	979.3	1038.8
70°	570.1	629.6	773.0	902.4	958.3
72.5°	482.7	545.6	692.5	818.4	877.9
75°	395.2	461.7	605.1	727.5	783.5
77.5°	311.3	384.7	524.6	619.1	654.1
80°	230.8	300.8	423.2	489.7	517.6
82.5°	160.9	220.3	311.3	346.3	353.3
85°	101.4	139.9	188.9	209.9	206.4
87.5°	45.5	56.0	70.0	76.9	73.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)