

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: P390022

Luminaire Tested: **22CZ2-100VHE-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: P390022  
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: 22CZ2-100VHE-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: 6991.3 lumens  
Efficiency: N/A  
Efficacy: 90.0 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

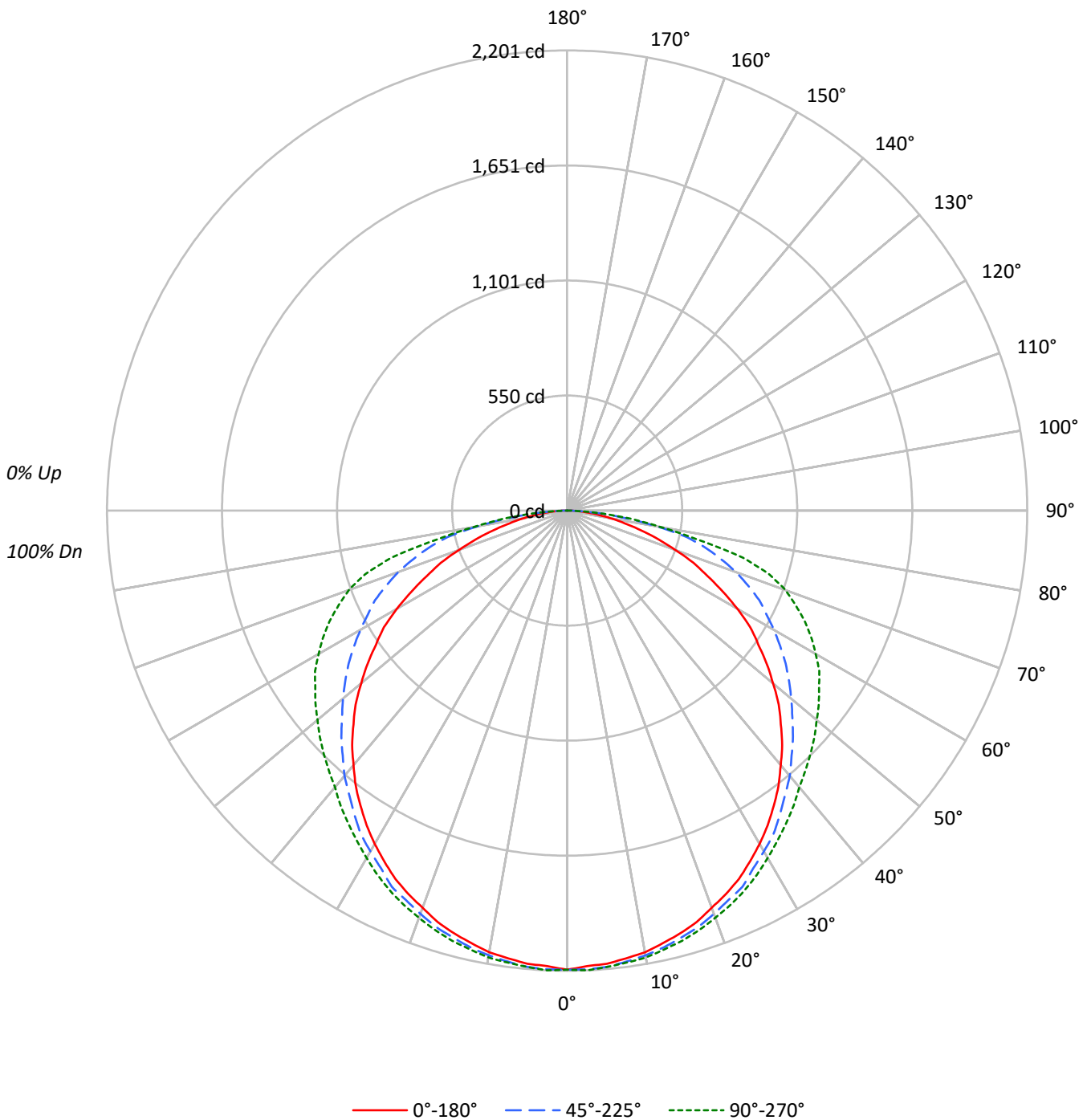
Input Watts (W): 77.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	5910	5910	5910
5°	5877	5918	5918
10°	5860	5902	5931
15°	5831	5889	5932
20°	5788	5877	5936
25°	5772	5894	5956
30°	5721	5849	5961
35°	5660	5829	5998
40°	5583	5818	6071
45°	5500	5813	6263
50°	5383	5856	6524
55°	5236	5984	6901
60°	5065	6145	7391
65°	4716	6451	7990
70°	4330	6758	8740
75°	3797	7112	9037
80°	3268	6775	7093
85°	2859	4922	5400



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	207.7	3.0
10°-20°	596.5	8.5
20°-30°	910.0	13.0
30°-40°	1111.1	15.9
40°-50°	1188.0	17.0
50°-60°	1146.7	16.4
60°-70°	987.1	14.1
70°-80°	667.9	9.6
80°-90°	176.2	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°	1714.2	24.5
0°-40°	2825.3	40.4
0°-60°	5160.1	73.8
0°-90°	6991.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6991.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2196	2196	2196	2196	2196	
5°	2176	2181	2191	2191	2191	207
15°	2093	2098	2114	2124	2129	591
25°	1944	1954	1985	1996	2006	895
35°	1723	1738	1774	1810	1826	1078
45°	1445	1471	1528	1605	1646	1116
55°	1116	1152	1276	1404	1471	1000
65°	741	813	1013	1173	1255	737
75°	365	483	684	823	869	392
85°	93	129	159	165	175	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2196.1	2196.1	2196.1	2196.1	2196.1
2.5°	2180.7	2185.8	2196.1	2196.1	2201.2
5°	2175.5	2180.7	2190.9	2190.9	2190.9
7.5°	2160.1	2165.2	2175.5	2180.7	2180.7
10°	2144.7	2149.8	2160.1	2165.2	2170.4
12.5°	2118.9	2124.1	2139.5	2149.8	2149.8
15°	2093.2	2098.4	2113.8	2124.1	2129.2
17.5°	2062.4	2072.7	2088.1	2098.4	2103.5
20°	2021.2	2031.5	2052.1	2067.5	2072.7
22.5°	1985.2	1995.5	2016.1	2031.5	2041.8
25°	1944.1	1954.4	1985.2	1995.5	2005.8
27.5°	1892.6	1902.9	1928.6	1949.2	1964.7
30°	1841.2	1851.5	1882.4	1908.1	1918.4
32.5°	1784.6	1800.1	1836.1	1856.6	1872.1
35°	1722.9	1738.4	1774.4	1810.4	1825.8
37.5°	1661.2	1676.6	1712.6	1758.9	1779.5
40°	1589.2	1609.8	1656.1	1717.8	1728.1
42.5°	1522.3	1548.1	1589.2	1661.2	1686.9
45°	1445.2	1470.9	1527.5	1604.6	1645.8
47.5°	1373.2	1398.9	1460.6	1553.2	1604.6
50°	1285.8	1321.8	1398.9	1506.9	1558.3
52.5°	1203.5	1234.3	1337.2	1455.5	1517.2
55°	1116.0	1152.0	1275.5	1404.1	1470.9
57.5°	1038.9	1069.8	1208.6	1352.6	1429.8
60°	941.2	982.3	1141.8	1296.1	1373.2
62.5°	838.3	900.0	1074.9	1234.3	1316.6
65°	740.6	812.6	1013.2	1172.6	1254.9
67.5°	653.2	730.3	936.0	1105.8	1182.9
70°	550.3	648.0	858.9	1023.5	1110.9
72.5°	457.7	565.7	771.5	936.0	1013.2
75°	365.2	483.4	684.0	822.9	869.2
77.5°	282.9	396.0	586.3	627.5	632.6
80°	210.9	313.7	437.2	442.3	457.7
82.5°	144.0	221.2	282.9	308.6	313.7
85°	92.6	128.6	159.4	164.6	174.9
87.5°	41.1	46.3	56.6	51.4	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)