

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: P390886

Luminaire Tested: **24CZ2-100VHE-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: P390886  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-100VHE-HRP-UNV-L930-CD1-SWPD1-U  
Description: 2x4 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: 7048.7 lumens  
Efficiency: N/A  
Efficacy: 101.3 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

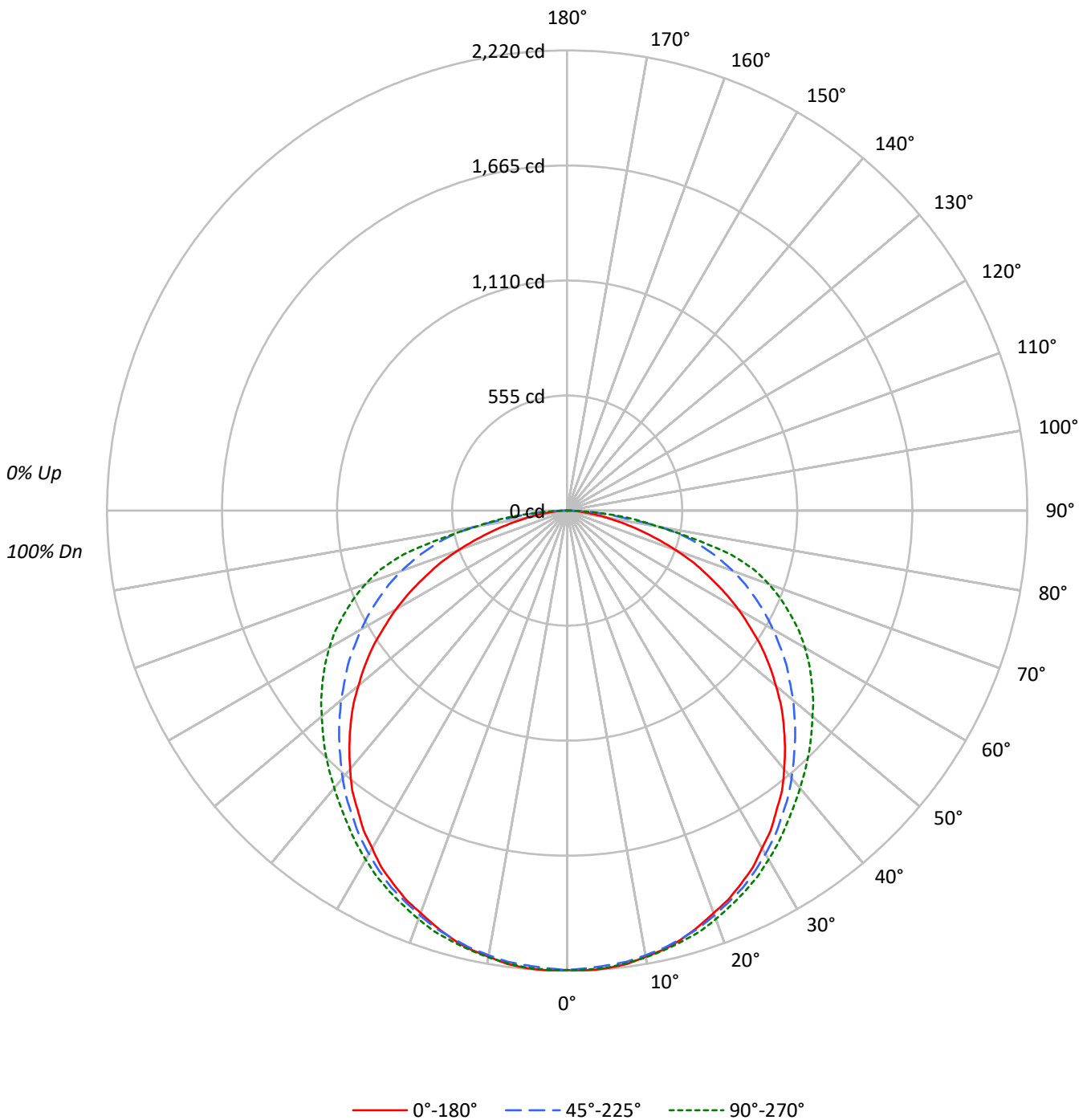
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	2982	2982	2982
5°	2994	2975	2989
10°	2985	2976	2990
15°	2981	2976	2995
20°	2959	2974	3004
25°	2948	2979	3010
30°	2922	2971	3020
35°	2894	2963	3032
40°	2862	2960	3070
45°	2814	2960	3140
50°	2752	2979	3235
55°	2682	3026	3379
60°	2569	3086	3566
65°	2404	3195	3784
70°	2187	3342	4071
75°	1854	3526	4253
80°	1463	3549	3440
85°	1079	2699	3023



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.3	3.0
10°-20°	605.1	8.6
20°-30°	925.4	13.1
30°-40°	1131.3	16.0
40°-50°	1205.7	17.1
50°-60°	1152.8	16.4
60°-70°	976.6	13.9
70°-80°	656.3	9.3
80°-90°	185.1	2.6
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°	1740.8	24.7
0°-40°	2872.1	40.7
0°-60°	5230.6	74.2
0°-90°	7048.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7048.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2217	2217	2217	2217	2217	
5°	2217	2213	2203	2213	2213	211
15°	2140	2140	2136	2154	2150	603
25°	1986	1993	2007	2024	2028	915
35°	1762	1776	1804	1839	1846	1104
45°	1479	1503	1556	1622	1650	1141
55°	1143	1185	1290	1392	1440	1018
65°	755	832	1003	1136	1189	750
75°	357	486	678	794	818	382
85°	70	143	175	189	196	87
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2216.6	2216.6	2216.6	2216.6	2216.6
2.5°	2220.1	2220.1	2209.6	2216.6	2216.6
5°	2216.6	2213.1	2202.6	2213.1	2213.1
7.5°	2206.1	2202.6	2195.6	2206.1	2202.6
10°	2185.1	2185.1	2178.2	2188.6	2188.6
12.5°	2167.7	2164.2	2160.7	2174.7	2171.2
15°	2139.7	2139.7	2136.2	2153.7	2150.2
17.5°	2104.7	2108.2	2111.7	2125.7	2129.2
20°	2066.3	2073.3	2076.8	2097.7	2097.7
22.5°	2031.3	2034.8	2041.8	2062.8	2062.8
25°	1985.9	1992.9	2006.8	2024.3	2027.8
27.5°	1940.4	1943.9	1961.4	1985.9	1989.4
30°	1881.0	1891.5	1912.4	1940.4	1943.9
32.5°	1828.5	1839.0	1863.5	1891.5	1898.5
35°	1762.1	1776.1	1804.1	1839.0	1846.0
37.5°	1702.7	1713.2	1748.1	1786.6	1797.1
40°	1629.2	1650.2	1685.2	1730.6	1748.1
42.5°	1555.8	1576.8	1618.8	1678.2	1699.2
45°	1478.9	1503.4	1555.8	1622.3	1650.2
47.5°	1402.0	1430.0	1489.4	1566.3	1597.8
50°	1314.6	1349.5	1423.0	1510.4	1545.3
52.5°	1230.7	1272.6	1353.0	1450.9	1496.4
55°	1143.3	1185.2	1290.1	1391.5	1440.5
57.5°	1045.4	1101.3	1216.7	1332.1	1384.5
60°	954.5	1006.9	1146.8	1272.6	1325.1
62.5°	856.6	926.5	1076.8	1209.7	1262.1
65°	755.2	832.1	1003.4	1136.3	1188.7
67.5°	664.3	748.2	930.0	1062.9	1115.3
70°	555.9	660.8	849.6	982.4	1034.9
72.5°	454.5	569.9	765.7	895.0	944.0
75°	356.6	486.0	678.3	793.6	818.1
77.5°	265.7	402.1	587.4	636.3	618.8
80°	188.8	321.7	458.0	433.5	444.0
82.5°	122.4	244.7	283.2	321.7	332.1
85°	69.9	143.3	174.8	188.8	195.8
87.5°	31.5	52.4	69.9	69.9	66.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)