

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: P391656

Luminaire Tested: **24CZ2-75VHE-HRP-UNV-L935-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: P391656
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: 24CZ2-75VHE-HRP-UNV-L935-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5365.1 lumens
Efficiency: N/A
Efficacy: 107.5 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

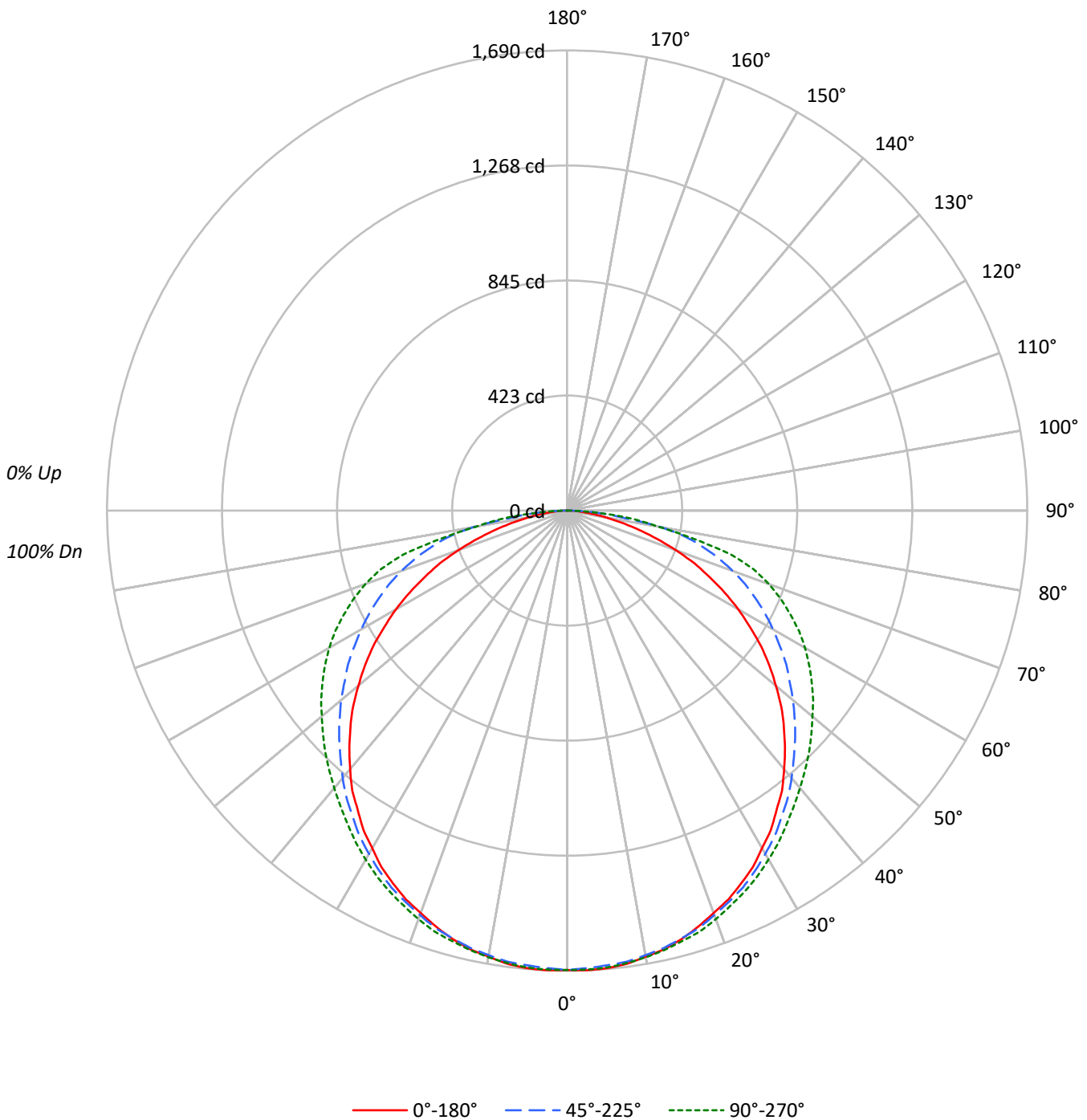
Input Watts (W): 49.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2270	2270	2270
5°	2279	2264	2275
10°	2272	2265	2276
15°	2269	2265	2280
20°	2252	2263	2286
25°	2244	2268	2291
30°	2224	2262	2299
35°	2203	2256	2308
40°	2178	2253	2337
45°	2142	2253	2390
50°	2094	2267	2462
55°	2041	2304	2572
60°	1955	2349	2714
65°	1830	2432	2881
70°	1664	2544	3099
75°	1411	2684	3237
80°	1113	2701	2619
85°	821	2055	2300



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.0	3.0
10°-20°	460.6	8.6
20°-30°	704.4	13.1
30°-40°	861.1	16.0
40°-50°	917.7	17.1
50°-60°	877.5	16.4
60°-70°	743.3	13.9
70°-80°	499.6	9.3
80°-90°	140.9	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°	1325.0	24.7
0°-40°	2186.1	40.7
0°-60°	3981.3	74.2
0°-90°	5365.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5365.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1687	1687	1687	1687	1687	
5°	1687	1684	1676	1684	1684	160
15°	1629	1629	1626	1639	1637	459
25°	1512	1517	1528	1541	1544	697
35°	1341	1352	1373	1400	1405	840
45°	1126	1144	1184	1235	1256	868
55°	870	902	982	1059	1096	775
65°	575	633	764	865	905	571
75°	271	370	516	604	623	291
85°	53	109	133	144	149	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1687.2	1687.2	1687.2	1687.2	1687.2
2.5°	1689.8	1689.8	1681.8	1687.2	1687.2
5°	1687.2	1684.5	1676.5	1684.5	1684.5
7.5°	1679.2	1676.5	1671.2	1679.2	1676.5
10°	1663.2	1663.2	1657.9	1665.9	1665.9
12.5°	1649.9	1647.3	1644.6	1655.2	1652.6
15°	1628.6	1628.6	1626.0	1639.3	1636.6
17.5°	1602.0	1604.7	1607.3	1618.0	1620.6
20°	1572.7	1578.1	1580.7	1596.7	1596.7
22.5°	1546.1	1548.8	1554.1	1570.1	1570.1
25°	1511.5	1516.9	1527.5	1540.8	1543.5
27.5°	1476.9	1479.6	1492.9	1511.5	1514.2
30°	1431.7	1439.7	1455.7	1476.9	1479.6
32.5°	1391.8	1399.8	1418.4	1439.7	1445.0
35°	1341.2	1351.9	1373.2	1399.8	1405.1
37.5°	1296.0	1304.0	1330.6	1359.8	1367.8
40°	1240.1	1256.1	1282.7	1317.3	1330.6
42.5°	1184.2	1200.2	1232.1	1277.4	1293.3
45°	1125.7	1144.3	1184.2	1234.8	1256.1
47.5°	1067.1	1088.4	1133.7	1192.2	1216.1
50°	1000.6	1027.2	1083.1	1149.6	1176.2
52.5°	936.7	968.7	1029.9	1104.4	1139.0
55°	870.2	902.1	982.0	1059.1	1096.4
57.5°	795.7	838.3	926.1	1013.9	1053.8
60°	726.5	766.4	872.9	968.7	1008.6
62.5°	652.0	705.2	819.6	920.8	960.7
65°	574.8	633.4	763.8	864.9	904.8
67.5°	505.6	569.5	707.9	809.0	848.9
70°	423.1	503.0	646.7	747.8	787.7
72.5°	345.9	433.8	582.8	681.3	718.5
75°	271.4	369.9	516.3	604.1	622.7
77.5°	202.2	306.0	447.1	484.3	471.0
80°	143.7	244.8	348.6	330.0	338.0
82.5°	93.1	186.3	215.6	244.8	252.8
85°	53.2	109.1	133.1	143.7	149.0
87.5°	24.0	39.9	53.2	53.2	50.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)