

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: P391653

Luminaire Tested: **24CZ2-75VHE-HRP-UNV-L930-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: P391653
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-L930-CD1-SDWPD1-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: 5235.6 lumens
Efficiency: N/A
Efficacy: 104.9 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

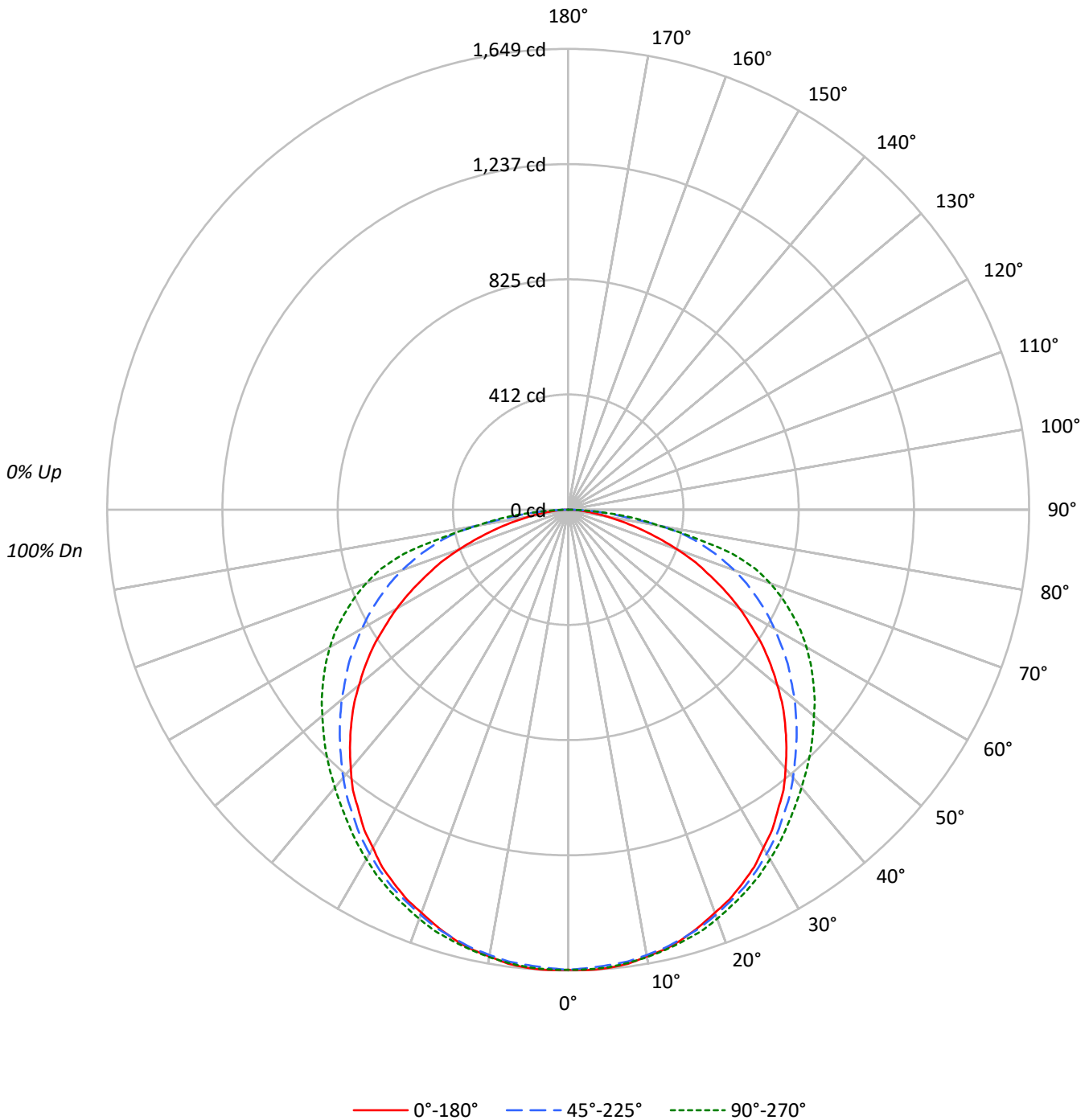
Input Watts (W): 49.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2215	2215	2215
5°	2224	2210	2220
10°	2218	2210	2221
15°	2214	2210	2225
20°	2198	2209	2231
25°	2190	2213	2236
30°	2171	2207	2243
35°	2150	2201	2252
40°	2126	2199	2281
45°	2090	2199	2332
50°	2044	2212	2403
55°	1992	2248	2510
60°	1908	2292	2648
65°	1786	2373	2811
70°	1624	2483	3024
75°	1377	2619	3159
80°	1086	2636	2555
85°	801	2004	2245



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.2	3.0
10°-20°	449.5	8.6
20°-30°	687.4	13.1
30°-40°	840.3	16.0
40°-50°	895.6	17.1
50°-60°	856.3	16.4
60°-70°	725.4	13.9
70°-80°	487.5	9.3
80°-90°	137.5	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°	1293.0	24.7
0°-40°	2133.3	40.7
0°-60°	3885.2	74.2
0°-90°	5235.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5235.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1646	1646	1646	1646	1646	
5°	1646	1644	1636	1644	1644	156
15°	1589	1589	1587	1600	1597	448
25°	1475	1480	1491	1504	1506	680
35°	1309	1319	1340	1366	1371	820
45°	1098	1117	1156	1205	1226	847
55°	849	880	958	1034	1070	756
65°	561	618	745	844	883	557
75°	265	361	504	590	608	284
85°	52	106	130	140	145	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1646.4	1646.4	1646.4	1646.4	1646.4
2.5°	1649.0	1649.0	1641.3	1646.4	1646.4
5°	1646.4	1643.8	1636.1	1643.8	1643.8
7.5°	1638.7	1636.1	1630.9	1638.7	1636.1
10°	1623.1	1623.1	1617.9	1625.7	1625.7
12.5°	1610.1	1607.5	1604.9	1615.3	1612.7
15°	1589.3	1589.3	1586.7	1599.7	1597.1
17.5°	1563.3	1565.9	1568.5	1578.9	1581.5
20°	1534.8	1540.0	1542.6	1558.2	1558.2
22.5°	1508.8	1511.4	1516.6	1532.2	1532.2
25°	1475.1	1480.2	1490.6	1503.6	1506.2
27.5°	1441.3	1443.9	1456.9	1475.1	1477.6
30°	1397.1	1404.9	1420.5	1441.3	1443.9
32.5°	1358.2	1366.0	1384.2	1404.9	1410.1
35°	1308.8	1319.2	1340.0	1366.0	1371.2
37.5°	1264.7	1272.5	1298.5	1327.0	1334.8
40°	1210.2	1225.7	1251.7	1285.5	1298.5
42.5°	1155.6	1171.2	1202.4	1246.5	1262.1
45°	1098.5	1116.7	1155.6	1205.0	1225.7
47.5°	1041.4	1062.1	1106.3	1163.4	1186.8
50°	976.4	1002.4	1056.9	1121.9	1147.8
52.5°	914.1	945.3	1005.0	1077.7	1111.5
55°	849.2	880.4	958.3	1033.6	1069.9
57.5°	776.5	818.0	903.7	989.4	1028.4
60°	709.0	747.9	851.8	945.3	984.2
62.5°	636.2	688.2	799.9	898.5	937.5
65°	560.9	618.1	745.3	844.0	883.0
67.5°	493.4	555.7	690.8	789.5	828.4
70°	412.9	490.8	631.1	729.7	768.7
72.5°	337.6	423.3	568.7	664.8	701.2
75°	264.9	361.0	503.8	589.5	607.7
77.5°	197.4	298.6	436.3	472.6	459.7
80°	140.2	238.9	340.2	322.0	329.8
82.5°	90.9	181.8	210.4	238.9	246.7
85°	51.9	106.5	129.8	140.2	145.4
87.5°	23.4	39.0	51.9	51.9	49.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)