

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: P276620

Luminaire Tested: **24CZ2-40HE-S-UNV-L92765-W2A1-U-5000K**

Issue Date: 3/3/2020

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: P276620
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40HE-S-UNV-L92765-W2A1-U-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3742.4 lumens
Efficiency: N/A
Efficacy: 129.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

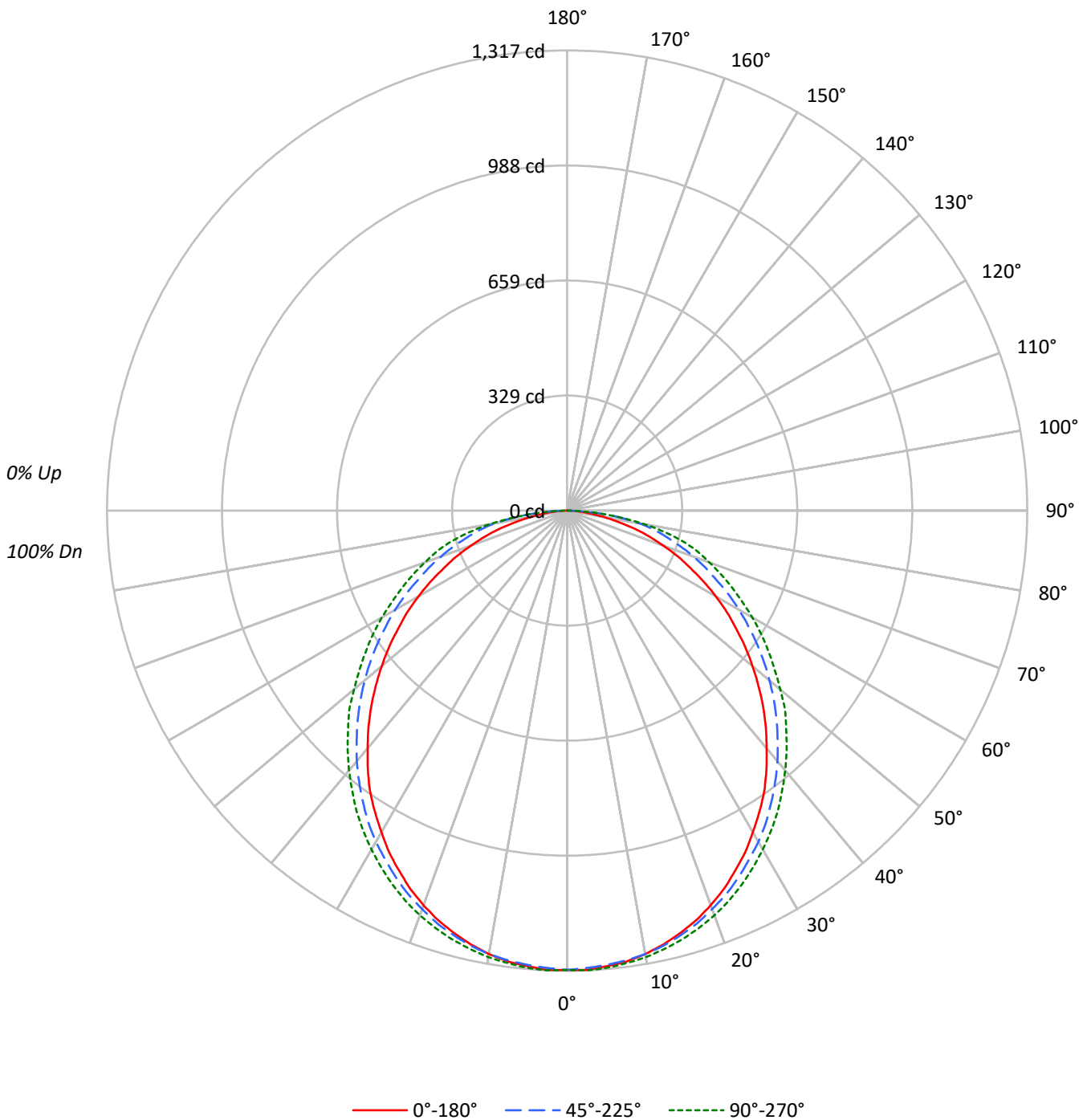
Input Watts (W): 28.923
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1769	1769	1769
5°	1768	1763	1774
10°	1761	1761	1774
15°	1744	1752	1770
20°	1721	1738	1765
25°	1689	1721	1754
30°	1651	1701	1740
35°	1615	1673	1726
40°	1560	1645	1706
45°	1509	1613	1687
50°	1451	1582	1667
55°	1386	1553	1651
60°	1321	1529	1647
65°	1238	1502	1658
70°	1146	1511	1702
75°	1026	1539	1798
80°	829	1630	1759
85°	624	1431	1394



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	3.3
10°-20°	355.6	9.5
20°-30°	534.6	14.3
30°-40°	636.8	17.0
40°-50°	651.7	17.4
50°-60°	586.8	15.7
60°-70°	460.8	12.3
70°-80°	299.1	8.0
80°-90°	92.5	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°	1014.7	27.1
0°-40°	1651.5	44.1
0°-60°	2890.0	77.2
0°-90°	3742.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3742.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1315	1315	1315	1315	1315	
5°	1309	1311	1305	1312	1314	124
15°	1252	1255	1258	1268	1271	353
25°	1138	1147	1159	1178	1182	524
35°	983	995	1019	1044	1051	613
45°	793	812	848	880	887	611
55°	591	617	662	697	704	530
65°	389	418	472	511	521	387
75°	197	235	296	336	346	209
85°	40	75	93	90	90	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1314.7	1314.7	1314.7	1314.7	1314.7
2.5°	1315.9	1315.9	1310.0	1315.9	1317.1
5°	1308.8	1311.2	1305.2	1312.3	1313.5
7.5°	1301.6	1301.6	1298.1	1305.2	1306.4
10°	1288.6	1289.8	1288.6	1296.9	1298.1
12.5°	1271.9	1274.3	1275.5	1283.8	1285.0
15°	1251.7	1255.3	1257.7	1268.4	1270.7
17.5°	1229.1	1232.7	1238.6	1250.5	1252.9
20°	1201.8	1206.6	1213.7	1229.1	1232.7
22.5°	1172.1	1176.8	1188.7	1203.0	1208.9
25°	1137.6	1147.1	1159.0	1178.0	1181.6
27.5°	1103.1	1111.5	1126.9	1147.1	1151.9
30°	1062.7	1075.8	1094.8	1115.0	1119.8
32.5°	1023.5	1036.6	1059.2	1080.5	1086.5
35°	983.1	995.0	1018.7	1043.7	1050.8
37.5°	936.7	952.2	978.3	1003.3	1010.4
40°	888.0	907.0	936.7	962.9	971.2
42.5°	841.6	861.8	891.5	920.1	929.6
45°	792.9	811.9	847.6	879.7	886.8
47.5°	743.0	764.3	802.4	834.5	846.4
50°	693.0	715.6	756.0	789.3	796.4
52.5°	643.1	666.9	709.7	745.3	748.9
55°	590.8	616.9	662.1	696.6	703.7
57.5°	543.2	565.8	614.6	650.2	658.6
60°	490.9	515.9	568.2	601.5	612.2
62.5°	441.0	467.2	521.8	555.1	564.6
65°	388.7	418.4	471.9	511.2	520.7
67.5°	343.5	372.1	429.1	467.2	476.7
70°	291.2	323.3	384.0	423.2	432.7
72.5°	246.1	279.3	340.0	378.0	392.3
75°	197.3	235.4	296.0	336.4	345.9
77.5°	149.8	193.8	255.6	286.5	286.5
80°	107.0	153.3	210.4	224.7	227.0
82.5°	70.1	115.3	155.7	154.5	154.5
85°	40.4	74.9	92.7	90.3	90.3
87.5°	15.5	30.9	33.3	33.3	32.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)