

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: P276401

Luminaire Tested: **24CZ2-40HE-S-UNV-L93050-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: P276401
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-L93050-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: 3781.3 lumens
Efficiency: N/A
Efficacy: 128.4 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

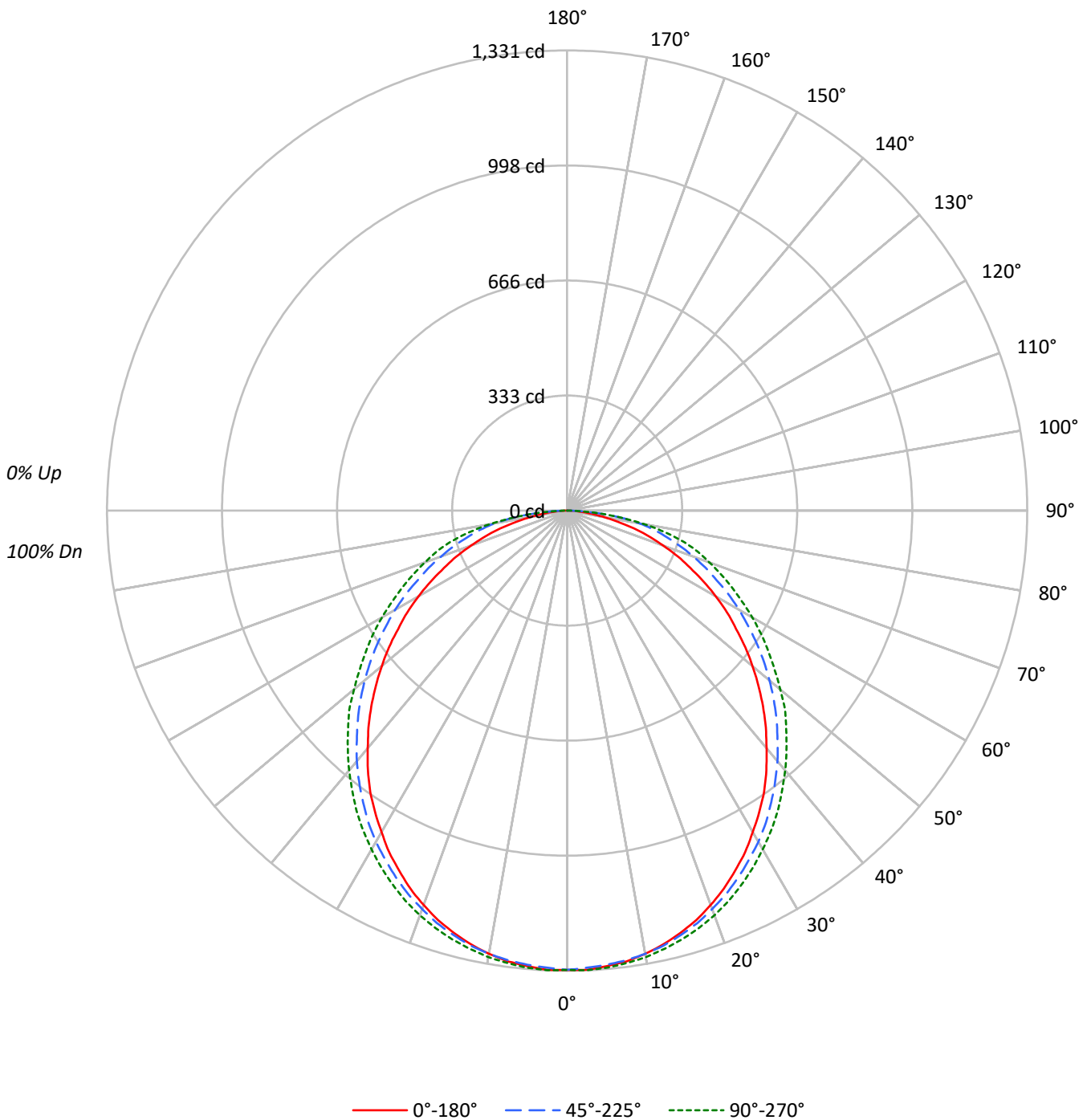
Input Watts (W): 29.459424
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1787	1787	1787
5°	1786	1781	1793
10°	1779	1779	1792
15°	1762	1770	1789
20°	1739	1756	1783
25°	1706	1739	1772
30°	1668	1719	1758
35°	1632	1691	1744
40°	1576	1662	1724
45°	1524	1630	1705
50°	1466	1599	1684
55°	1400	1569	1668
60°	1335	1545	1665
65°	1251	1518	1675
70°	1158	1526	1720
75°	1037	1555	1817
80°	838	1647	1777
85°	630	1447	1409



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.8	3.3
10°-20°	359.3	9.5
20°-30°	540.2	14.3
30°-40°	643.4	17.0
40°-50°	658.5	17.4
50°-60°	592.9	15.7
60°-70°	465.6	12.3
70°-80°	302.2	8.0
80°-90°	93.4	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°	1025.3	27.1
0°-40°	1668.7	44.1
0°-60°	2920.1	77.2
0°-90°	3781.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3781.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1328	1328	1328	1328	1328	
5°	1322	1325	1319	1326	1327	126
15°	1265	1268	1271	1282	1284	357
25°	1149	1159	1171	1190	1194	530
35°	993	1005	1029	1055	1062	620
45°	801	820	856	889	896	618
55°	597	623	669	704	711	535
65°	393	423	477	516	526	391
75°	199	238	299	340	350	211
85°	41	76	94	91	91	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1328.4	1328.4	1328.4	1328.4	1328.4
2.5°	1329.6	1329.6	1323.6	1329.6	1330.8
5°	1322.4	1324.8	1318.8	1326.0	1327.2
7.5°	1315.2	1315.2	1311.6	1318.8	1320.0
10°	1302.0	1303.2	1302.0	1310.4	1311.6
12.5°	1285.2	1287.6	1288.8	1297.2	1298.4
15°	1264.7	1268.4	1270.8	1281.6	1284.0
17.5°	1241.9	1245.5	1251.5	1263.5	1266.0
20°	1214.3	1219.1	1226.3	1241.9	1245.5
22.5°	1184.3	1189.1	1201.1	1215.5	1221.5
25°	1149.4	1159.1	1171.1	1190.3	1193.9
27.5°	1114.6	1123.0	1138.6	1159.1	1163.9
30°	1073.8	1087.0	1106.2	1126.6	1131.4
32.5°	1034.1	1047.4	1070.2	1091.8	1097.8
35°	993.3	1005.3	1029.3	1054.6	1061.8
37.5°	946.5	962.1	988.5	1013.7	1020.9
40°	897.2	916.4	946.5	972.9	981.3
42.5°	850.4	870.8	900.8	929.6	939.3
45°	801.1	820.3	856.4	888.8	896.0
47.5°	750.7	772.3	810.7	843.2	855.2
50°	700.2	723.1	763.9	797.5	804.7
52.5°	649.8	673.8	717.1	753.1	756.7
55°	596.9	623.4	669.0	703.8	711.0
57.5°	548.9	571.7	621.0	657.0	665.4
60°	496.1	521.3	574.1	607.8	618.6
62.5°	445.6	472.0	527.3	560.9	570.5
65°	392.8	422.8	476.8	516.5	526.1
67.5°	347.1	375.9	433.6	472.0	481.6
70°	294.3	326.7	388.0	427.6	437.2
72.5°	248.6	282.3	343.5	381.9	396.4
75°	199.4	237.8	299.1	339.9	349.5
77.5°	151.3	195.8	258.2	289.5	289.5
80°	108.1	154.9	212.6	227.0	229.4
82.5°	70.9	116.5	157.3	156.1	156.1
85°	40.8	75.7	93.7	91.3	91.3
87.5°	15.6	31.2	33.6	33.6	32.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)