

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: P276458

Luminaire Tested: **24CZ2-50-S-UNV-L93050-W2A1-U-3500K**

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: P276458
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: 24CZ2-50-S-UNV-L93050-W2A1-U-3500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (168) 90 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4226.2 lumens
Efficiency: N/A
Efficacy: 104.4 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

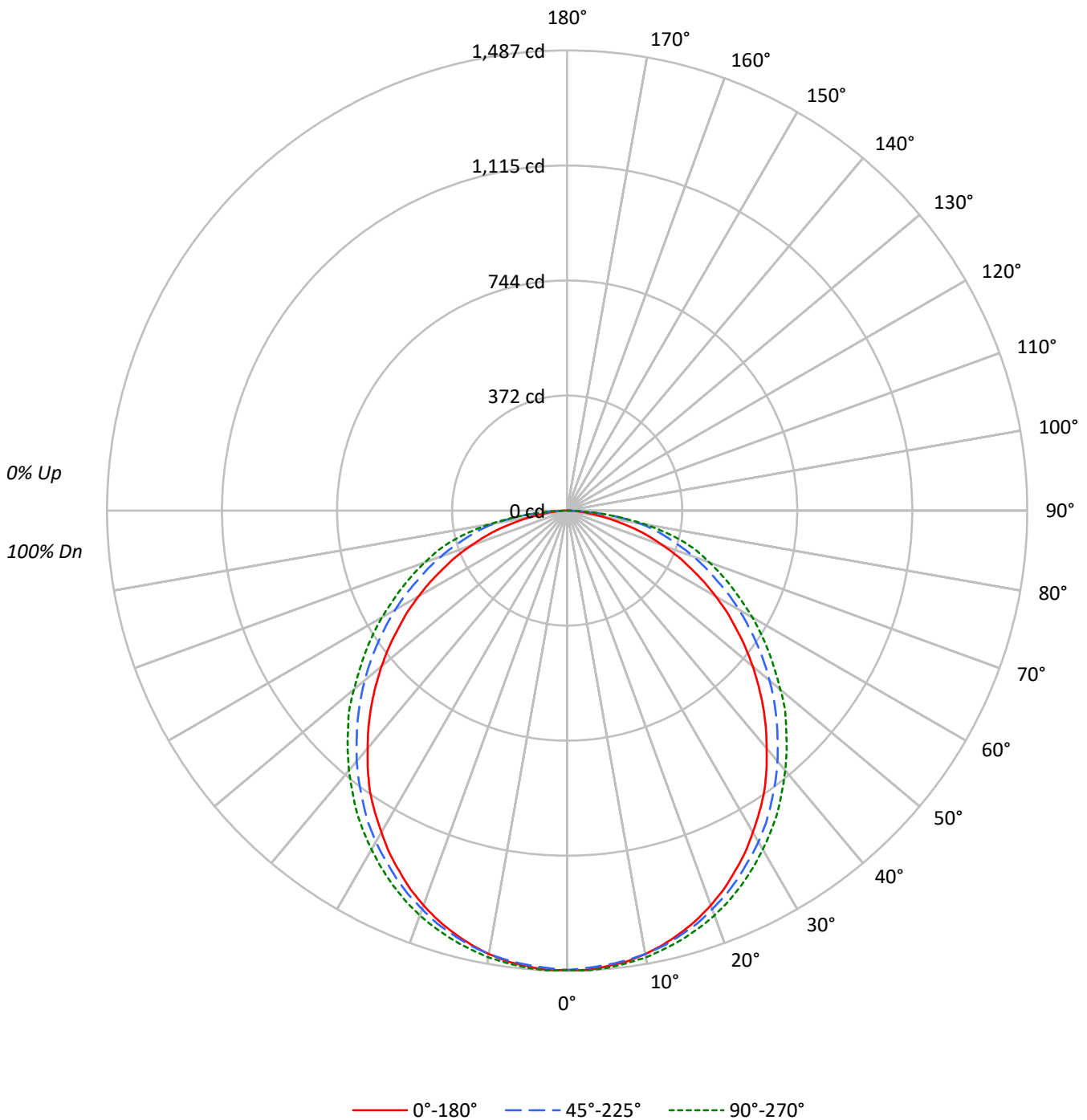
Input Watts (W): 40.465509
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1998	1998	1998
5°	1996	1991	2003
10°	1988	1988	2003
15°	1969	1978	1999
20°	1943	1962	1993
25°	1907	1943	1981
30°	1865	1921	1965
35°	1824	1890	1949
40°	1761	1858	1926
45°	1704	1821	1905
50°	1638	1787	1883
55°	1565	1754	1864
60°	1492	1727	1860
65°	1398	1697	1872
70°	1294	1706	1922
75°	1158	1738	2031
80°	936	1841	1987
85°	704	1616	1575



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.6	3.3
10°-20°	401.6	9.5
20°-30°	603.7	14.3
30°-40°	719.1	17.0
40°-50°	736.0	17.4
50°-60°	662.6	15.7
60°-70°	520.4	12.3
70°-80°	337.7	8.0
80°-90°	104.5	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°	1145.9	27.1
0°-40°	1865.0	44.1
0°-60°	3263.6	77.2
0°-90°	4226.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4226.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1485	1485	1485	1485	1485	
5°	1478	1481	1474	1482	1483	140
15°	1414	1418	1420	1432	1435	399
25°	1285	1295	1309	1330	1334	592
35°	1110	1124	1150	1179	1187	693
45°	895	917	957	993	1001	690
55°	667	697	748	787	795	598
65°	439	472	533	577	588	437
75°	223	266	334	380	391	236
85°	46	85	105	102	102	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1484.7	1484.7	1484.7	1484.7	1484.7
2.5°	1486.0	1486.0	1479.3	1486.0	1487.4
5°	1478.0	1480.7	1473.9	1482.0	1483.3
7.5°	1469.9	1469.9	1465.9	1473.9	1475.3
10°	1455.1	1456.5	1455.1	1464.5	1465.9
12.5°	1436.4	1439.0	1440.4	1449.8	1451.1
15°	1413.5	1417.6	1420.2	1432.3	1435.0
17.5°	1388.0	1392.1	1398.8	1412.2	1414.9
20°	1357.2	1362.5	1370.6	1388.0	1392.1
22.5°	1323.6	1329.0	1342.4	1358.5	1365.2
25°	1284.7	1295.4	1308.8	1330.3	1334.3
27.5°	1245.7	1255.1	1272.6	1295.4	1300.8
30°	1200.1	1214.9	1236.3	1259.2	1264.5
32.5°	1155.8	1170.6	1196.1	1220.2	1226.9
35°	1110.2	1123.6	1150.4	1178.6	1186.7
37.5°	1057.8	1075.3	1104.8	1133.0	1141.0
40°	1002.8	1024.2	1057.8	1087.3	1096.7
42.5°	950.4	973.2	1006.8	1039.0	1049.7
45°	895.4	916.9	957.1	993.4	1001.4
47.5°	839.0	863.2	906.1	942.4	955.8
50°	782.6	808.1	853.8	891.3	899.4
52.5°	726.2	753.1	801.4	841.7	845.7
55°	667.2	696.7	747.7	786.6	794.7
57.5°	613.5	639.0	694.0	734.3	743.7
60°	554.4	582.6	641.7	679.2	691.3
62.5°	498.0	527.6	589.3	626.9	637.6
65°	439.0	472.5	532.9	577.2	588.0
67.5°	387.9	420.2	484.6	527.6	538.3
70°	328.9	365.1	433.6	477.9	488.6
72.5°	277.9	315.5	383.9	426.9	443.0
75°	222.8	265.8	334.3	379.9	390.6
77.5°	169.1	218.8	288.6	323.5	323.5
80°	120.8	173.2	237.6	253.7	256.4
82.5°	79.2	130.2	175.9	174.5	174.5
85°	45.6	84.6	104.7	102.0	102.0
87.5°	17.5	34.9	37.6	37.6	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)