

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: P276453

Luminaire Tested: **24CZ2-45-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: P276453
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: 24CZ2-45-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: 3829.1 lumens
Efficiency: N/A
Efficacy: 107.5 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

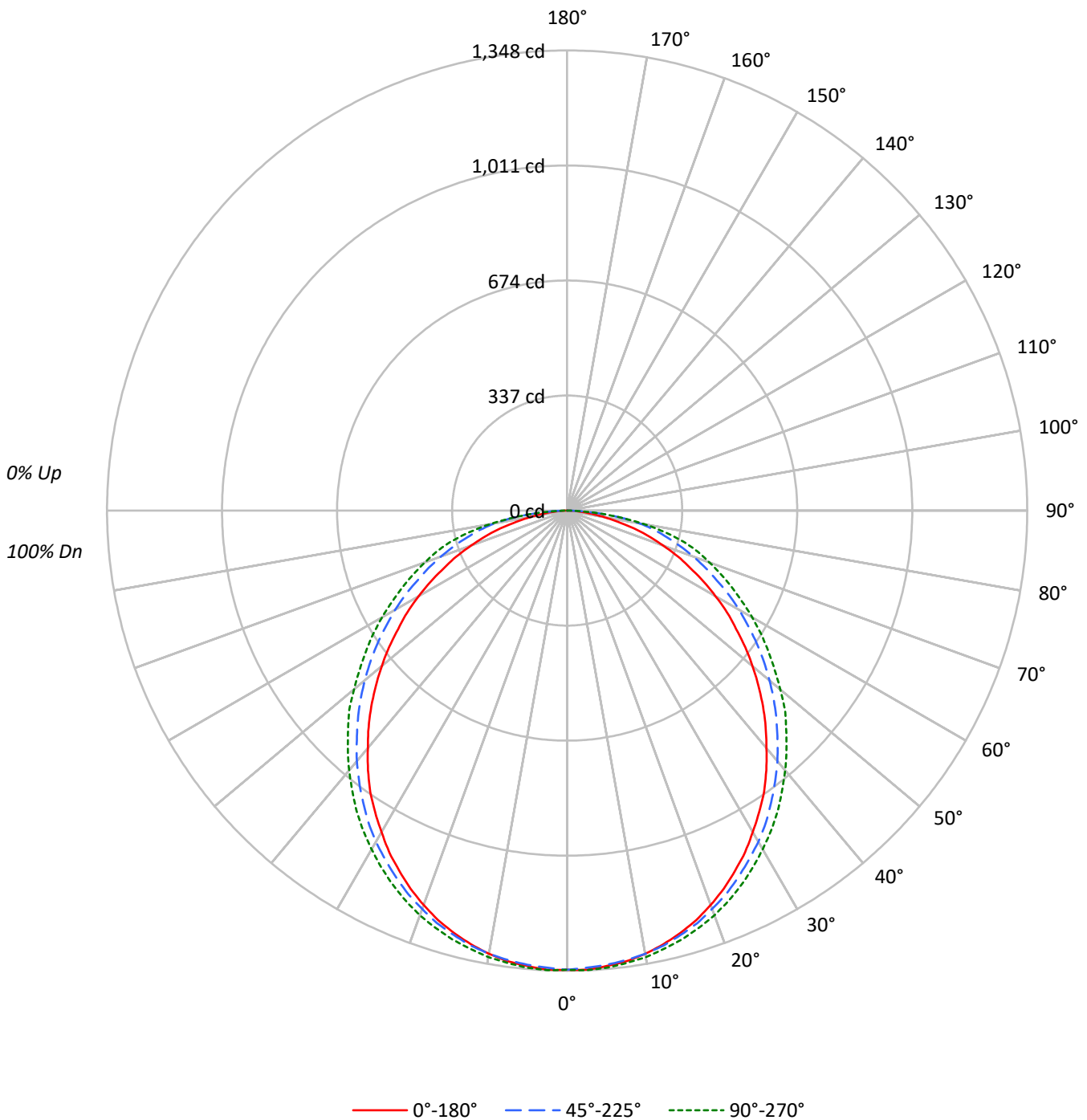
Input Watts (W): 35.632392
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1810	1810	1810
5°	1809	1804	1815
10°	1801	1801	1815
15°	1784	1792	1811
20°	1761	1778	1806
25°	1728	1760	1795
30°	1689	1740	1780
35°	1652	1712	1766
40°	1596	1683	1745
45°	1544	1650	1726
50°	1484	1619	1706
55°	1418	1589	1689
60°	1352	1565	1686
65°	1266	1537	1696
70°	1172	1545	1742
75°	1050	1574	1840
80°	848	1668	1800
85°	639	1465	1426



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.3	3.3
10°-20°	363.9	9.5
20°-30°	547.0	14.3
30°-40°	651.6	17.0
40°-50°	666.8	17.4
50°-60°	600.3	15.7
60°-70°	471.5	12.3
70°-80°	306.0	8.0
80°-90°	94.6	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°	1038.2	27.1
0°-40°	1689.8	44.1
0°-60°	2957.0	77.2
0°-90°	3829.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3829.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1345	1345	1345	1345	1345	
5°	1339	1342	1335	1343	1344	127
15°	1281	1284	1287	1298	1300	361
25°	1164	1174	1186	1205	1209	536
35°	1006	1018	1042	1068	1075	627
45°	811	831	867	900	907	625
55°	604	631	678	713	720	542
65°	398	428	483	523	533	396
75°	202	241	303	344	354	214
85°	41	77	95	92	92	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1345.2	1345.2	1345.2	1345.2	1345.2
2.5°	1346.4	1346.4	1340.3	1346.4	1347.6
5°	1339.1	1341.5	1335.4	1342.7	1344.0
7.5°	1331.8	1331.8	1328.1	1335.4	1336.7
10°	1318.4	1319.6	1318.4	1326.9	1328.1
12.5°	1301.4	1303.8	1305.0	1313.6	1314.8
15°	1280.7	1284.4	1286.8	1297.7	1300.2
17.5°	1257.6	1261.3	1267.3	1279.5	1281.9
20°	1229.6	1234.5	1241.8	1257.6	1261.3
22.5°	1199.2	1204.1	1216.3	1230.8	1236.9
25°	1164.0	1173.7	1185.8	1205.3	1209.0
27.5°	1128.7	1137.2	1153.0	1173.7	1178.5
30°	1087.3	1100.7	1120.2	1140.8	1145.7
32.5°	1047.2	1060.6	1083.7	1105.6	1111.7
35°	1005.8	1018.0	1042.3	1067.9	1075.2
37.5°	958.4	974.2	1001.0	1026.5	1033.8
40°	908.5	928.0	958.4	985.2	993.7
42.5°	861.1	881.8	912.2	941.4	951.1
45°	811.2	830.7	867.2	900.0	907.3
47.5°	760.2	782.1	821.0	853.8	866.0
50°	709.1	732.2	773.5	807.6	814.9
52.5°	658.0	682.3	726.1	762.6	766.2
55°	604.5	631.2	677.5	712.7	720.0
57.5°	555.8	578.9	628.8	665.3	673.8
60°	502.3	527.9	581.4	615.4	626.4
62.5°	451.2	478.0	533.9	568.0	577.7
65°	397.7	428.1	482.9	523.0	532.7
67.5°	351.5	380.7	439.1	478.0	487.7
70°	298.0	330.8	392.8	433.0	442.7
72.5°	251.8	285.8	347.8	386.8	401.4
75°	201.9	240.8	302.8	344.2	353.9
77.5°	153.2	198.2	261.5	293.1	293.1
80°	109.5	156.9	215.3	229.9	232.3
82.5°	71.8	118.0	159.3	158.1	158.1
85°	41.4	76.6	94.9	92.4	92.4
87.5°	15.8	31.6	34.1	34.1	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)