

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: P389737

Luminaire Tested: **24CZ2-40VHE-S-UNV-L935-CD1-SWPD1-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: P389737
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40VHE-S-UNV-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3546.3 lumens
Efficiency: N/A
Efficacy: 135.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

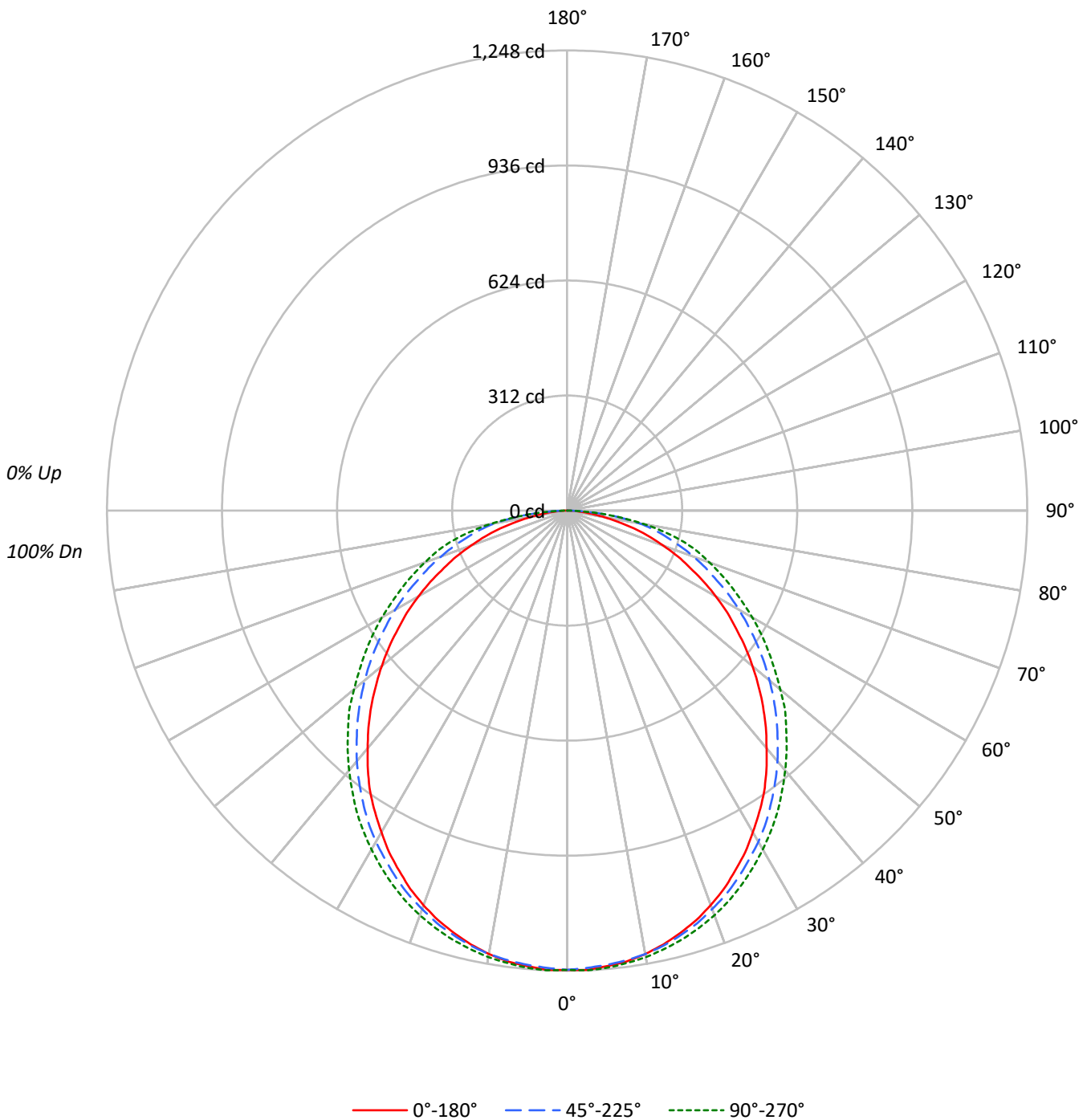
Input Watts (W): 26.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1676	1676	1676
5°	1675	1670	1681
10°	1668	1668	1681
15°	1652	1660	1677
20°	1631	1647	1673
25°	1600	1631	1662
30°	1565	1612	1649
35°	1530	1586	1636
40°	1478	1559	1616
45°	1430	1528	1599
50°	1375	1500	1580
55°	1313	1472	1564
60°	1252	1449	1561
65°	1173	1424	1571
70°	1086	1431	1613
75°	972	1458	1704
80°	786	1545	1667
85°	591	1357	1321



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.9	3.3
10°-20°	337.0	9.5
20°-30°	506.6	14.3
30°-40°	603.4	17.0
40°-50°	617.6	17.4
50°-60°	556.0	15.7
60°-70°	436.6	12.3
70°-80°	283.4	8.0
80°-90°	87.6	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°	961.6	27.1
0°-40°	1565.0	44.1
0°-60°	2738.6	77.2
0°-90°	3546.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3546.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1246	1246	1246	1246	1246	
5°	1240	1242	1237	1244	1245	118
15°	1186	1190	1192	1202	1204	334
25°	1078	1087	1098	1116	1120	497
35°	932	943	965	989	996	581
45°	751	769	803	834	840	579
55°	560	585	627	660	667	502
65°	368	396	447	484	493	367
75°	187	223	280	319	328	198
85°	38	71	88	86	86	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1245.8	1245.8	1245.8	1245.8	1245.8
2.5°	1247.0	1247.0	1241.3	1247.0	1248.1
5°	1240.2	1242.5	1236.8	1243.6	1244.7
7.5°	1233.4	1233.4	1230.1	1236.8	1238.0
10°	1221.1	1222.2	1221.1	1228.9	1230.1
12.5°	1205.3	1207.5	1208.7	1216.6	1217.7
15°	1186.1	1189.5	1191.8	1201.9	1204.2
17.5°	1164.7	1168.1	1173.7	1185.0	1187.3
20°	1138.8	1143.3	1150.1	1164.7	1168.1
22.5°	1110.7	1115.2	1126.4	1140.0	1145.6
25°	1078.0	1087.0	1098.3	1116.3	1119.7
27.5°	1045.3	1053.2	1067.9	1087.0	1091.5
30°	1007.0	1019.4	1037.4	1056.6	1061.1
32.5°	969.9	982.3	1003.7	1023.9	1029.6
35°	931.6	942.8	965.4	989.0	995.8
37.5°	887.6	902.3	927.1	950.7	957.5
40°	841.4	859.5	887.6	912.4	920.3
42.5°	797.5	816.7	844.8	871.9	880.9
45°	751.3	769.4	803.1	833.6	840.3
47.5°	704.0	724.3	760.3	790.8	802.0
50°	656.7	678.1	716.4	748.0	754.7
52.5°	609.4	631.9	672.5	706.3	709.7
55°	559.8	584.6	627.4	660.1	666.9
57.5°	514.8	536.2	582.4	616.2	624.0
60°	465.2	488.9	538.4	570.0	580.1
62.5°	417.9	442.7	494.5	526.0	535.1
65°	368.3	396.5	447.2	484.4	493.4
67.5°	325.5	352.6	406.6	442.7	451.7
70°	276.0	306.4	363.8	401.0	410.0
72.5°	233.2	264.7	322.2	358.2	371.7
75°	187.0	223.0	280.5	318.8	327.8
77.5°	141.9	183.6	242.2	271.5	271.5
80°	101.4	145.3	199.4	212.9	215.1
82.5°	66.5	109.3	147.6	146.4	146.4
85°	38.3	71.0	87.9	85.6	85.6
87.5°	14.6	29.3	31.5	31.5	30.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)