

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: P388852

Luminaire Tested: **24CZ2-50VHE-UNV-L940-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: P388852
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50VHE-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4272.1 lumens
Efficiency: N/A
Efficacy: 130.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

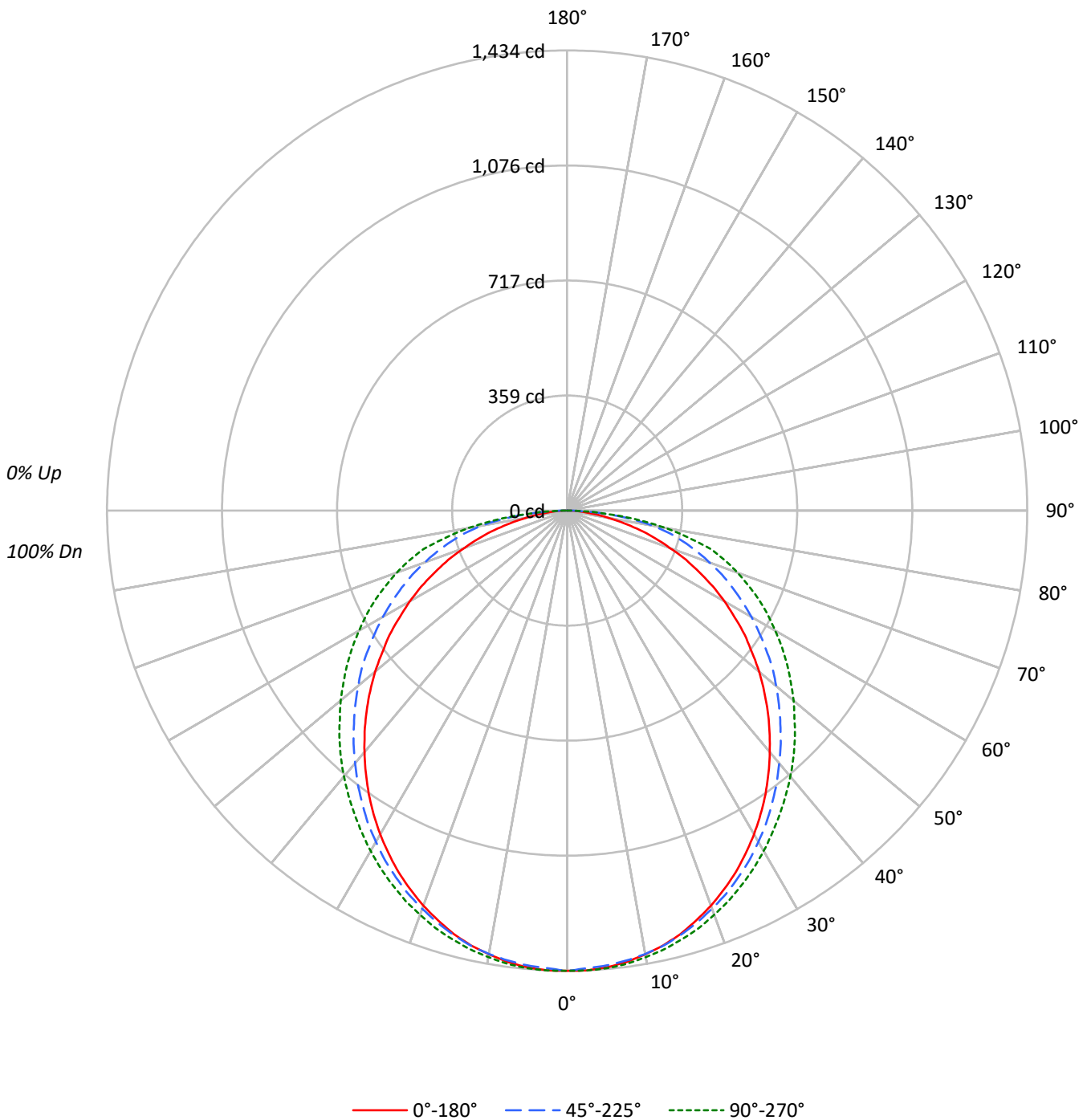
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1930	1930	1930
5°	1930	1922	1933
10°	1919	1917	1931
15°	1903	1907	1926
20°	1876	1890	1919
25°	1846	1873	1911
30°	1810	1852	1903
35°	1770	1829	1897
40°	1725	1806	1901
45°	1682	1788	1910
50°	1635	1779	1928
55°	1585	1776	1963
60°	1523	1784	2014
65°	1443	1811	2102
70°	1341	1856	2221
75°	1223	1949	2409
80°	1005	2099	2408
85°	770	1937	2069



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.7	3.2
10°-20°	387.3	9.1
20°-30°	582.8	13.6
30°-40°	698.4	16.3
40°-50°	727.8	17.0
50°-60°	677.2	15.9
60°-70°	557.7	13.1
70°-80°	379.8	8.9
80°-90°	125.4	2.9
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°	1105.7	25.9
0°-40°	1804.1	42.2
0°-60°	3209.1	75.1
0°-90°	4272.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4272.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1429	1429	1423	1430	1432	136
15°	1366	1367	1369	1382	1383	385
25°	1243	1249	1262	1283	1288	572
35°	1078	1091	1114	1144	1155	674
45°	884	902	940	987	1004	682
55°	676	699	757	817	837	602
65°	453	492	569	636	660	450
75°	235	288	375	442	463	248
85°	50	97	126	134	134	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1434.3	1434.3	1434.3	1434.3	1434.3
2.5°	1434.3	1434.3	1427.2	1434.3	1434.3
5°	1428.6	1428.6	1422.9	1430.1	1431.5
7.5°	1418.7	1420.1	1414.4	1422.9	1424.4
10°	1404.4	1405.8	1403.0	1411.5	1413.0
12.5°	1387.3	1388.7	1388.7	1398.7	1400.1
15°	1365.9	1367.3	1368.8	1381.6	1383.0
17.5°	1338.8	1343.1	1345.9	1361.6	1364.5
20°	1310.3	1314.6	1320.3	1337.4	1340.2
22.5°	1277.5	1283.2	1293.2	1311.7	1316.0
25°	1243.3	1249.0	1261.8	1283.2	1287.5
27.5°	1204.8	1213.3	1229.0	1251.8	1257.5
30°	1164.9	1173.4	1192.0	1216.2	1224.8
32.5°	1122.1	1133.5	1154.9	1182.0	1190.5
35°	1077.9	1090.7	1113.5	1143.5	1154.9
37.5°	1030.8	1045.1	1072.2	1105.0	1119.2
40°	982.4	999.5	1028.0	1066.5	1082.2
42.5°	933.9	949.6	985.2	1026.6	1043.7
45°	884.0	902.5	939.6	986.6	1003.8
47.5°	832.7	851.2	895.4	945.3	961.0
50°	781.3	799.9	849.8	902.5	921.1
52.5°	725.7	750.0	807.0	859.8	878.3
55°	675.8	698.6	757.1	817.0	836.9
57.5°	618.8	645.9	710.0	772.8	794.2
60°	566.0	594.6	663.0	727.2	748.5
62.5°	511.9	543.2	615.9	681.5	705.8
65°	453.4	491.9	568.9	635.9	660.1
67.5°	400.6	440.6	521.8	590.3	611.7
70°	340.8	389.2	471.9	540.4	564.6
72.5°	289.4	337.9	424.9	491.9	516.1
75°	235.3	288.0	375.0	442.0	463.4
77.5°	181.1	239.5	326.5	377.8	385.0
80°	129.7	191.1	270.9	300.8	310.8
82.5°	91.3	146.9	199.6	219.6	225.3
85°	49.9	97.0	125.5	134.0	134.0
87.5°	21.4	41.3	49.9	51.3	52.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)