

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: P388893

Luminaire Tested: **24CZ2-60VHE-UNV-L930-CD1-SDWPD1-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: P388893
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: 24CZ2-60VHE-UNV-L930-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4874.3 lumens
Efficiency: N/A
Efficacy: 126.0 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

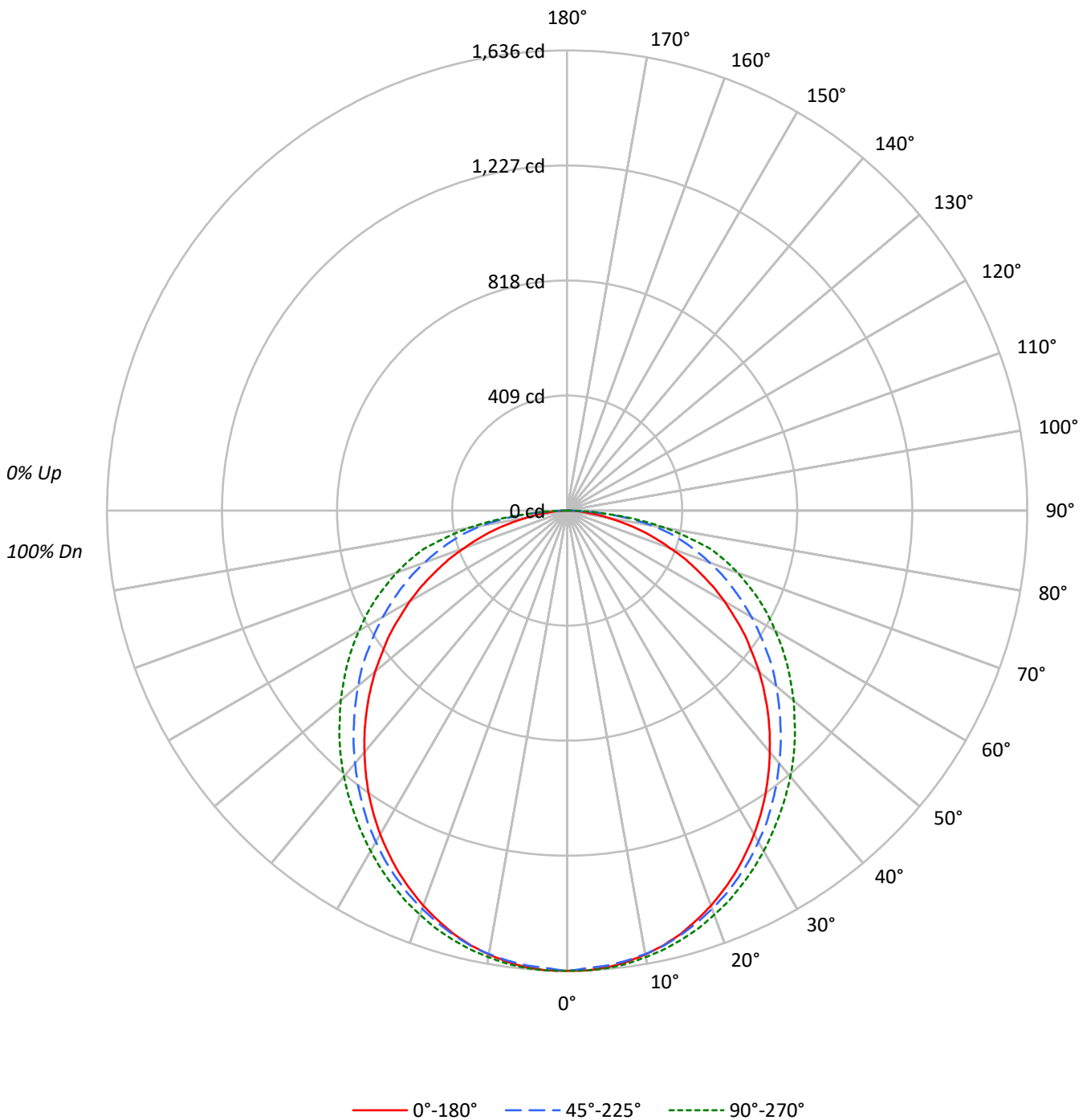
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2202	2202	2202
5°	2202	2193	2206
10°	2189	2187	2203
15°	2171	2175	2198
20°	2141	2157	2190
25°	2106	2137	2181
30°	2065	2113	2171
35°	2020	2087	2164
40°	1969	2060	2169
45°	1919	2040	2179
50°	1866	2030	2200
55°	1809	2026	2240
60°	1738	2035	2298
65°	1647	2067	2398
70°	1530	2118	2534
75°	1395	2224	2748
80°	1147	2395	2748
85°	878	2211	2360



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.8	3.2
10°-20°	441.9	9.1
20°-30°	664.9	13.6
30°-40°	796.9	16.3
40°-50°	830.4	17.0
50°-60°	772.6	15.9
60°-70°	636.3	13.1
70°-80°	433.4	8.9
80°-90°	143.1	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°	1261.6	25.9
0°-40°	2058.5	42.2
0°-60°	3661.5	75.1
0°-90°	4874.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4874.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1636	1636	1636	1636	1636	
5°	1630	1630	1624	1632	1633	155
15°	1558	1560	1562	1576	1578	439
25°	1418	1425	1440	1464	1469	653
35°	1230	1244	1270	1305	1318	769
45°	1009	1030	1072	1126	1145	778
55°	771	797	864	932	955	687
65°	517	561	649	726	753	513
75°	268	329	428	504	529	283
85°	57	111	143	153	153	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1636.5	1636.5	1636.5	1636.5	1636.5
2.5°	1636.5	1636.5	1628.4	1636.5	1636.5
5°	1630.0	1630.0	1623.5	1631.6	1633.3
7.5°	1618.6	1620.3	1613.8	1623.5	1625.1
10°	1602.4	1604.0	1600.7	1610.5	1612.1
12.5°	1582.8	1584.5	1584.5	1595.9	1597.5
15°	1558.4	1560.1	1561.7	1576.3	1578.0
17.5°	1527.5	1532.4	1535.7	1553.6	1556.8
20°	1495.0	1499.9	1506.4	1525.9	1529.2
22.5°	1457.6	1464.1	1475.5	1496.6	1501.5
25°	1418.5	1425.0	1439.7	1464.1	1469.0
27.5°	1374.6	1384.4	1402.3	1428.3	1434.8
30°	1329.1	1338.8	1360.0	1387.6	1397.4
32.5°	1280.3	1293.3	1317.7	1348.6	1358.4
35°	1229.8	1244.5	1270.5	1304.7	1317.7
37.5°	1176.2	1192.4	1223.3	1260.7	1277.0
40°	1120.8	1140.4	1172.9	1216.8	1234.7
42.5°	1065.5	1083.4	1124.1	1171.3	1190.8
45°	1008.6	1029.7	1072.0	1125.7	1145.2
47.5°	950.0	971.2	1021.6	1078.5	1096.4
50°	891.5	912.6	969.6	1029.7	1050.9
52.5°	828.0	855.7	920.8	980.9	1002.1
55°	771.1	797.1	863.8	932.1	954.9
57.5°	706.0	736.9	810.1	881.7	906.1
60°	645.8	678.4	756.4	829.7	854.1
62.5°	584.0	619.8	702.8	777.6	805.3
65°	517.3	561.2	649.1	725.5	753.2
67.5°	457.1	502.7	595.4	673.5	697.9
70°	388.8	444.1	538.5	616.5	644.2
72.5°	330.2	385.5	484.8	561.2	588.9
75°	268.4	328.6	427.8	504.3	528.7
77.5°	206.6	273.3	372.5	431.1	439.2
80°	148.0	218.0	309.1	343.2	354.6
82.5°	104.1	167.6	227.7	250.5	257.0
85°	56.9	110.6	143.2	152.9	152.9
87.5°	24.4	47.2	56.9	58.6	60.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)