

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: P389066

Luminaire Tested: **24CZ2-70VHE-SQR-UNV-L930-CD1-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: P389066
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70VHE-SQR-UNV-L930-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5593.4 lumens
Efficiency: N/A
Efficacy: 122.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

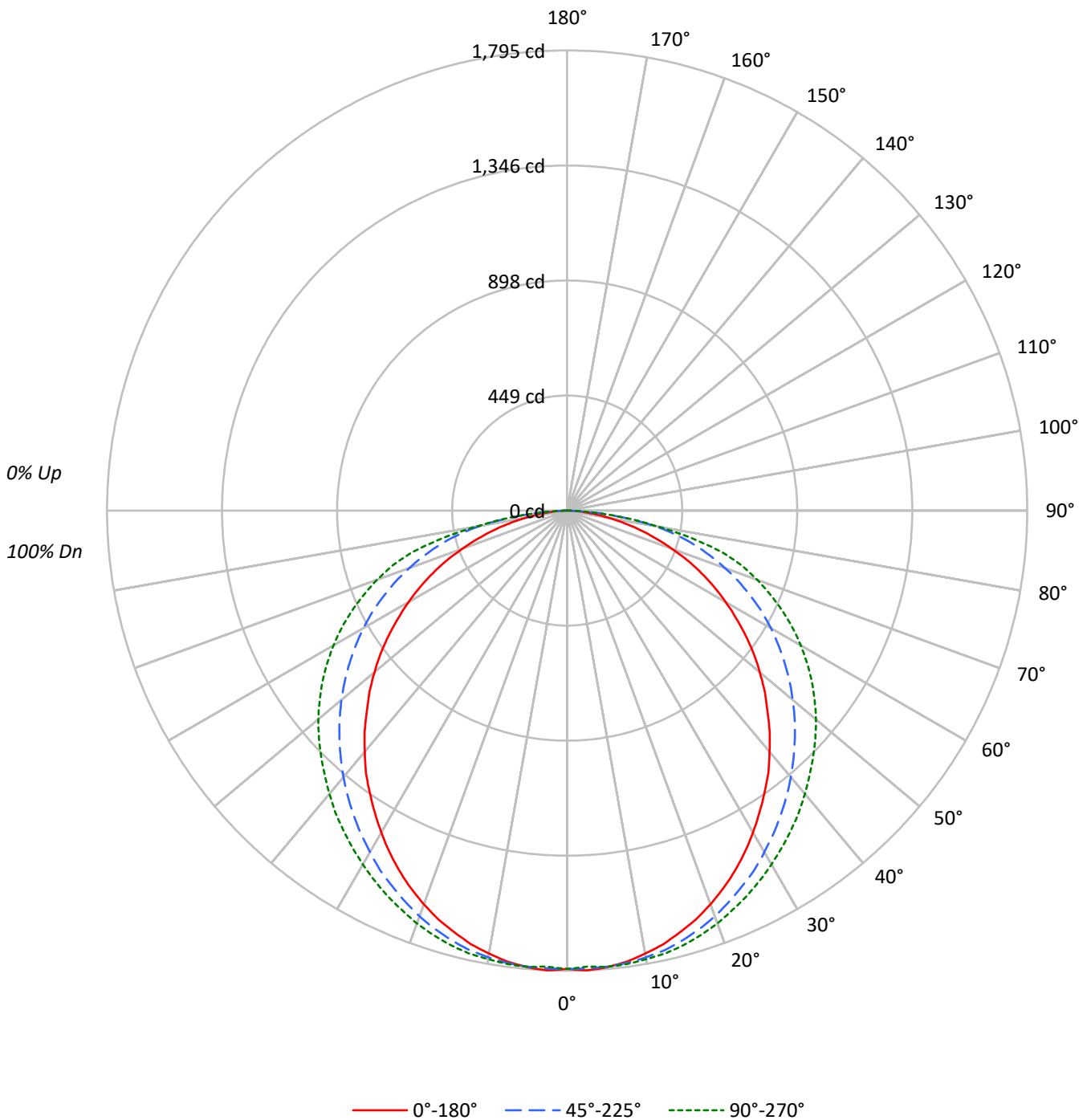
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73		80	75	71		77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51		62	55	50		60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44		55	49	43		54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38		50	43	38		48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34		45	39	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		42	35	30		40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27		38	32	27		37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24		36	29	24		35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2406	2406	2406
5°	2415	2412	2412
10°	2397	2418	2428
15°	2372	2418	2444
20°	2340	2412	2454
25°	2301	2399	2462
30°	2253	2390	2476
35°	2206	2385	2500
40°	2157	2385	2534
45°	2102	2390	2583
50°	2053	2405	2652
55°	1993	2431	2734
60°	1924	2470	2833
65°	1840	2517	2952
70°	1708	2579	3103
75°	1546	2669	3245
80°	1303	2676	2791
85°	997	2024	2024



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.7	3.0
10°-20°	488.3	8.7
20°-30°	741.7	13.3
30°-40°	902.1	16.1
40°-50°	960.5	17.2
50°-60°	914.8	16.4
60°-70°	765.0	13.7
70°-80°	510.1	9.1
80°-90°	141.1	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°	1399.7	25.0
0°-40°	2301.8	41.2
0°-60°	4177.2	74.7
0°-90°	5593.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5593.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1788	1788	1788	1788	1788	
5°	1788	1777	1786	1786	1786	170
15°	1703	1707	1736	1749	1755	480
25°	1550	1570	1616	1644	1659	713
35°	1343	1382	1452	1500	1522	840
45°	1104	1164	1256	1326	1358	854
55°	850	924	1036	1127	1166	760
65°	578	663	790	888	927	571
75°	297	392	514	600	624	315
85°	65	120	131	129	131	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1787.9	1787.9	1787.9	1787.9	1787.9
2.5°	1795.3	1782.4	1787.9	1787.9	1780.5
5°	1787.9	1776.8	1786.1	1786.1	1786.1
7.5°	1775.0	1765.8	1780.5	1784.2	1784.2
10°	1754.7	1751.0	1769.5	1775.0	1776.8
12.5°	1732.5	1730.7	1756.5	1763.9	1769.5
15°	1703.0	1706.7	1736.2	1749.1	1754.7
17.5°	1671.6	1678.9	1712.2	1730.7	1736.2
20°	1634.6	1645.7	1684.5	1703.0	1714.0
22.5°	1594.0	1610.6	1651.2	1673.4	1686.3
25°	1549.7	1570.0	1616.1	1643.9	1658.6
27.5°	1501.6	1527.5	1581.1	1612.5	1627.2
30°	1449.9	1479.5	1538.6	1575.5	1594.0
32.5°	1396.4	1431.4	1496.1	1536.7	1558.9
35°	1342.8	1381.6	1451.8	1499.8	1522.0
37.5°	1289.2	1328.0	1405.6	1457.3	1485.0
40°	1228.3	1274.4	1357.6	1414.8	1442.5
42.5°	1169.2	1219.0	1307.7	1370.5	1400.0
45°	1104.5	1163.6	1256.0	1326.2	1357.6
47.5°	1045.4	1104.5	1204.3	1278.1	1313.2
50°	980.8	1043.6	1148.9	1230.1	1267.1
52.5°	918.0	982.6	1093.4	1180.3	1217.2
55°	849.6	923.5	1036.2	1126.7	1165.5
57.5°	781.3	860.7	977.1	1071.3	1110.1
60°	714.8	796.1	918.0	1012.2	1052.8
62.5°	648.3	729.6	857.0	953.1	991.9
65°	578.1	663.1	790.5	888.4	927.2
67.5°	507.9	596.6	724.0	821.9	858.9
70°	434.1	528.2	655.7	751.7	788.7
72.5°	365.7	459.9	585.5	679.7	714.8
75°	297.4	391.6	513.5	600.3	624.3
77.5°	230.9	325.1	434.1	491.3	496.9
80°	168.1	256.7	345.4	362.0	360.2
82.5°	112.7	192.1	238.3	240.1	245.7
85°	64.6	120.1	131.1	129.3	131.1
87.5°	25.9	42.5	36.9	27.7	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)