

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: P389067

Luminaire Tested: **24CZ2-70VHE-SQR-UNV-L935-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: P389067
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-L935-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5592.4 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

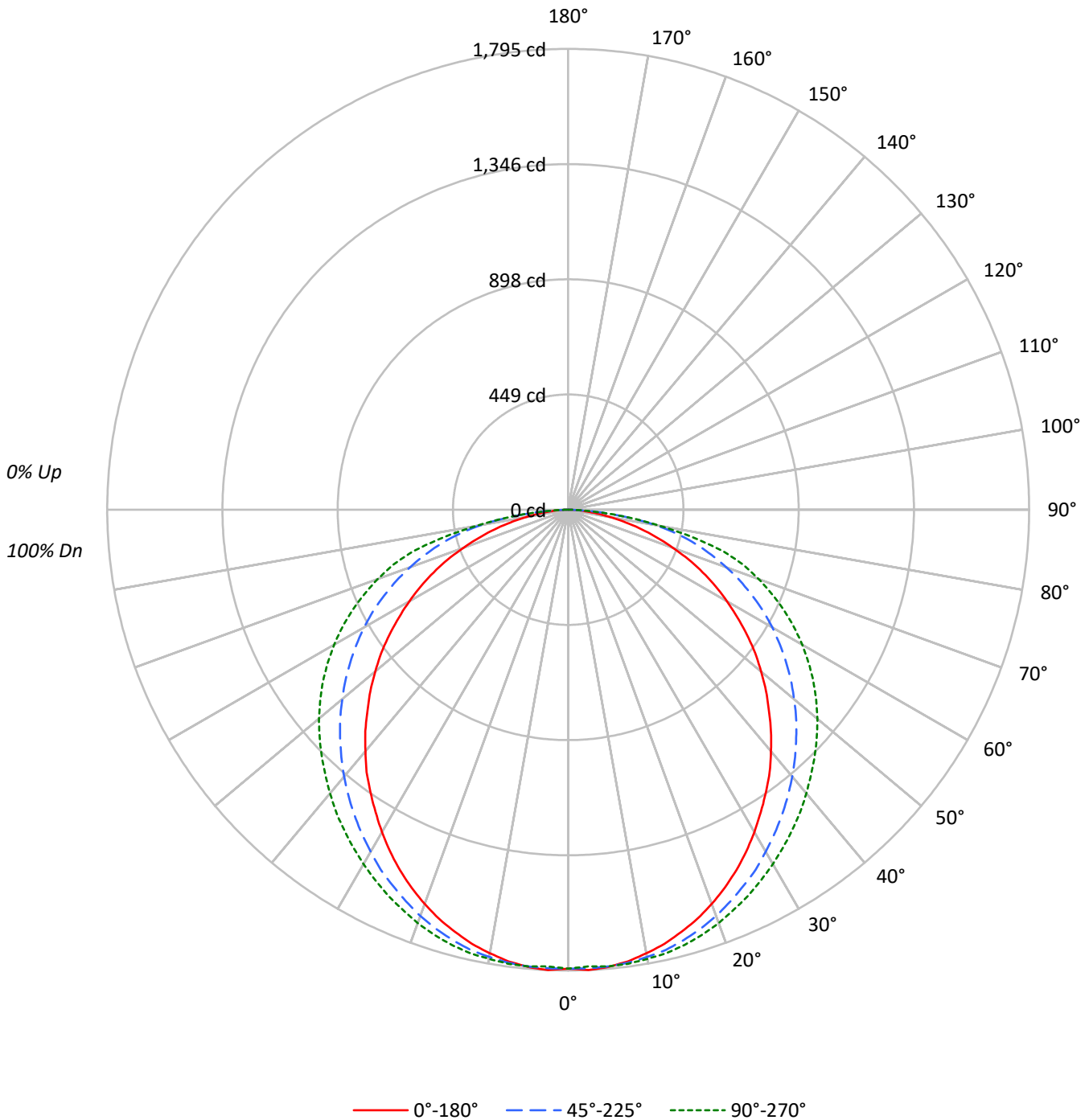
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2405	2405	2405
5°	2414	2412	2412
10°	2397	2417	2427
15°	2372	2418	2444
20°	2340	2412	2454
25°	2300	2399	2462
30°	2252	2390	2476
35°	2205	2384	2499
40°	2157	2384	2533
45°	2101	2390	2583
50°	2053	2404	2652
55°	1993	2430	2734
60°	1923	2470	2833
65°	1840	2516	2951
70°	1707	2579	3102
75°	1546	2669	3245
80°	1302	2676	2790
85°	997	2024	2024



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.7	3.0
10°-20°	488.2	8.7
20°-30°	741.5	13.3
30°-40°	902.0	16.1
40°-50°	960.3	17.2
50°-60°	914.7	16.4
60°-70°	764.9	13.7
70°-80°	510.0	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°	1399.4	25.0
0°-40°	2301.4	41.2
0°-60°	4176.4	74.7
0°-90°	5592.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5592.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1788	1788	1788	1788	1788	
5°	1788	1776	1786	1786	1786	170
15°	1703	1706	1736	1749	1754	480
25°	1549	1570	1616	1644	1658	713
35°	1342	1381	1452	1500	1522	840
45°	1104	1163	1256	1326	1357	854
55°	850	923	1036	1126	1165	759
65°	578	663	790	888	927	571
75°	297	392	513	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°	1787.6	1787.6	1787.6	1787.6	1787.6
2.5°	1795.0	1782.1	1787.6	1787.6	1780.2
5°	1787.6	1776.5	1785.8	1785.8	1785.8
7.5°	1774.7	1765.4	1780.2	1783.9	1783.9
10°	1754.4	1750.7	1769.1	1774.7	1776.5
12.5°	1732.2	1730.4	1756.2	1763.6	1769.1
15°	1702.7	1706.3	1735.9	1748.8	1754.4
17.5°	1671.3	1678.6	1711.9	1730.4	1735.9
20°	1634.3	1645.4	1684.2	1702.7	1713.7
22.5°	1593.7	1610.3	1650.9	1673.1	1686.0
25°	1549.4	1569.7	1615.9	1643.6	1658.3
27.5°	1501.4	1527.2	1580.8	1612.2	1626.9
30°	1449.7	1479.2	1538.3	1575.2	1593.7
32.5°	1396.1	1431.2	1495.8	1536.5	1558.6
35°	1342.5	1381.3	1451.5	1499.5	1521.7
37.5°	1289.0	1327.8	1405.3	1457.0	1484.7
40°	1228.1	1274.2	1357.3	1414.6	1442.3
42.5°	1169.0	1218.8	1307.5	1370.2	1399.8
45°	1104.3	1163.4	1255.8	1325.9	1357.3
47.5°	1045.2	1104.3	1204.0	1277.9	1313.0
50°	980.6	1043.4	1148.6	1229.9	1266.8
52.5°	917.8	982.4	1093.2	1180.0	1217.0
55°	849.5	923.3	1036.0	1126.5	1165.3
57.5°	781.2	860.6	976.9	1071.1	1109.9
60°	714.7	795.9	917.8	1012.0	1052.6
62.5°	648.2	729.4	856.9	952.9	991.7
65°	578.0	663.0	790.4	888.3	927.0
67.5°	507.8	596.5	723.9	821.8	858.7
70°	434.0	528.2	655.6	751.6	788.5
72.5°	365.6	459.8	585.4	679.6	714.7
75°	297.3	391.5	513.4	600.2	624.2
77.5°	230.8	325.0	434.0	491.2	496.8
80°	168.0	256.7	345.3	362.0	360.1
82.5°	112.6	192.1	238.2	240.1	245.6
85°	64.6	120.0	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)