

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: P389830

Luminaire Tested: **24CZ2-60VHE-S-UNV-L930-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: P389830
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: 24CZ2-60VHE-S-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5184.1 lumens
Efficiency: N/A
Efficacy: 134.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

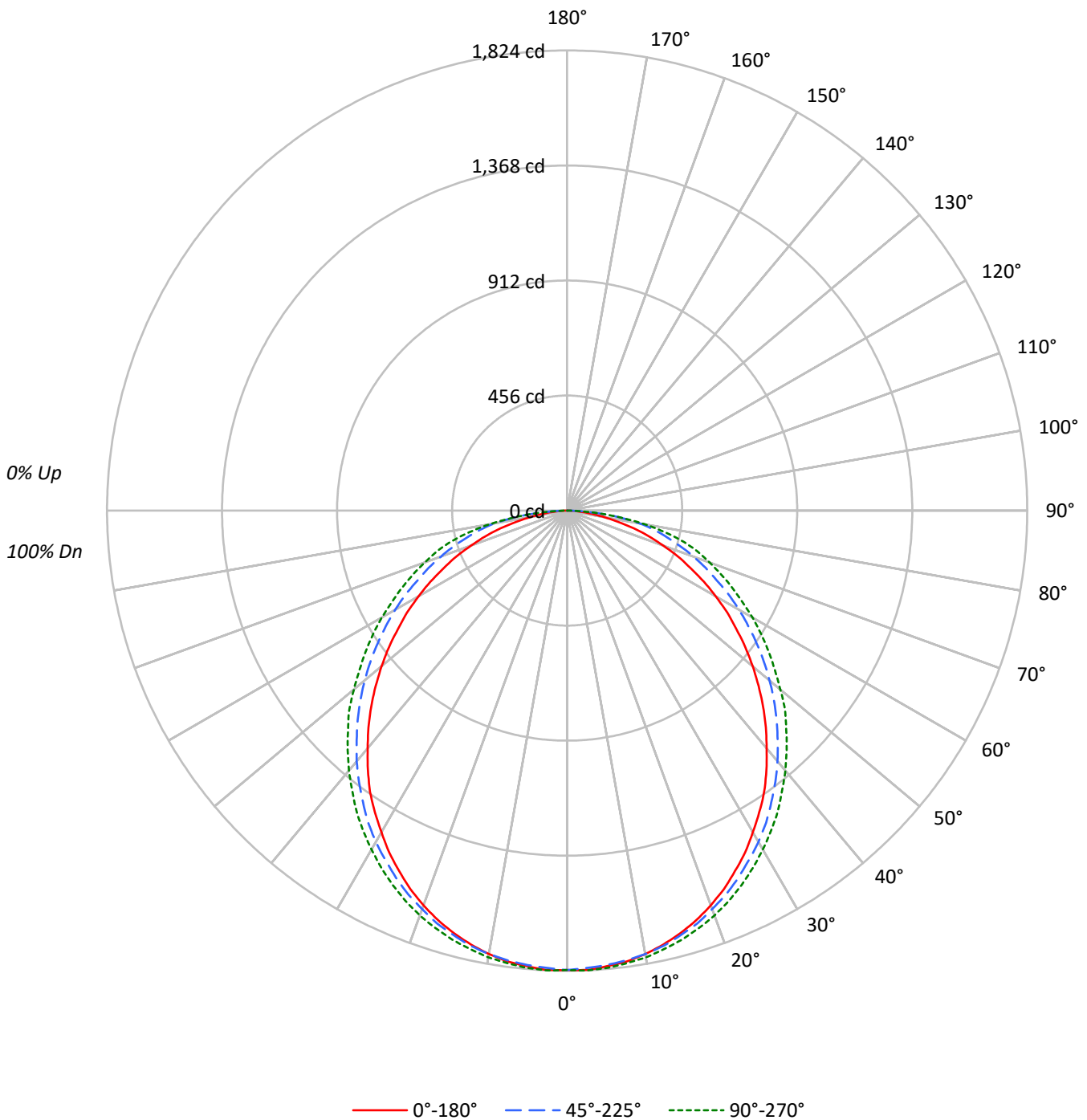
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2450	2450	2450
5°	2449	2442	2458
10°	2439	2439	2457
15°	2415	2427	2452
20°	2384	2407	2445
25°	2340	2383	2430
30°	2287	2356	2410
35°	2237	2318	2391
40°	2161	2279	2363
45°	2090	2234	2337
50°	2009	2192	2309
55°	1920	2152	2287
60°	1830	2118	2282
65°	1714	2081	2296
70°	1587	2092	2358
75°	1421	2131	2491
80°	1148	2259	2437
85°	865	1982	1931



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.4	3.3
10°-20°	492.7	9.5
20°-30°	740.6	14.3
30°-40°	882.1	17.0
40°-50°	902.8	17.4
50°-60°	812.8	15.7
60°-70°	638.3	12.3
70°-80°	414.3	8.0
80°-90°	128.1	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°	1405.6	27.1
0°-40°	2287.8	44.1
0°-60°	4003.4	77.2
0°-90°	5184.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5184.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1821	1821	1821	1821	1821	
5°	1813	1816	1808	1818	1820	172
15°	1734	1739	1742	1757	1760	489
25°	1576	1589	1606	1632	1637	726
35°	1362	1378	1411	1446	1456	850
45°	1098	1125	1174	1218	1228	847
55°	818	855	917	965	975	734
65°	538	580	654	708	721	536
75°	273	326	410	466	479	289
85°	56	104	128	125	125	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1821.2	1821.2	1821.2	1821.2	1821.2
2.5°	1822.9	1822.9	1814.6	1822.9	1824.5
5°	1813.0	1816.3	1808.0	1817.9	1819.6
7.5°	1803.1	1803.1	1798.2	1808.0	1809.7
10°	1785.0	1786.6	1785.0	1796.5	1798.2
12.5°	1761.9	1765.2	1766.9	1778.4	1780.0
15°	1733.9	1738.9	1742.2	1757.0	1760.3
17.5°	1702.6	1707.6	1715.8	1732.3	1735.6
20°	1664.8	1671.4	1681.2	1702.6	1707.6
22.5°	1623.6	1630.2	1646.7	1666.4	1674.7
25°	1575.9	1589.0	1605.5	1631.8	1636.8
27.5°	1528.1	1539.6	1561.0	1589.0	1595.6
30°	1472.1	1490.2	1516.6	1544.6	1551.2
32.5°	1417.8	1435.9	1467.2	1496.8	1505.0
35°	1361.8	1378.3	1411.2	1445.8	1455.6
37.5°	1297.6	1319.0	1355.2	1389.8	1399.7
40°	1230.1	1256.4	1297.6	1333.8	1345.3
42.5°	1165.8	1193.8	1235.0	1274.5	1287.7
45°	1098.3	1124.7	1174.1	1218.5	1228.4
47.5°	1029.2	1058.8	1111.5	1156.0	1172.4
50°	960.0	991.3	1047.3	1093.4	1103.3
52.5°	890.8	923.8	983.1	1032.5	1037.4
55°	818.4	854.6	917.2	964.9	974.8
57.5°	752.5	783.8	851.3	900.7	912.3
60°	680.1	714.7	787.1	833.2	848.0
62.5°	610.9	647.1	722.9	769.0	782.2
65°	538.5	579.6	653.7	708.1	721.2
67.5°	475.9	515.4	594.4	647.1	660.3
70°	403.4	447.9	531.9	586.2	599.4
72.5°	340.9	387.0	470.9	523.6	543.4
75°	273.3	326.0	410.0	466.0	479.2
77.5°	207.5	268.4	354.0	396.8	396.8
80°	148.2	212.4	291.5	311.2	314.5
82.5°	97.2	159.7	215.7	214.1	214.1
85°	56.0	103.7	128.4	125.1	125.1
87.5°	21.4	42.8	46.1	46.1	44.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)