

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: P388903

Luminaire Tested: **24CZ2-60VHE-UNV-L950-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: P388903
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-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5422.0 lumens
Efficiency: N/A
Efficacy: 140.1 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

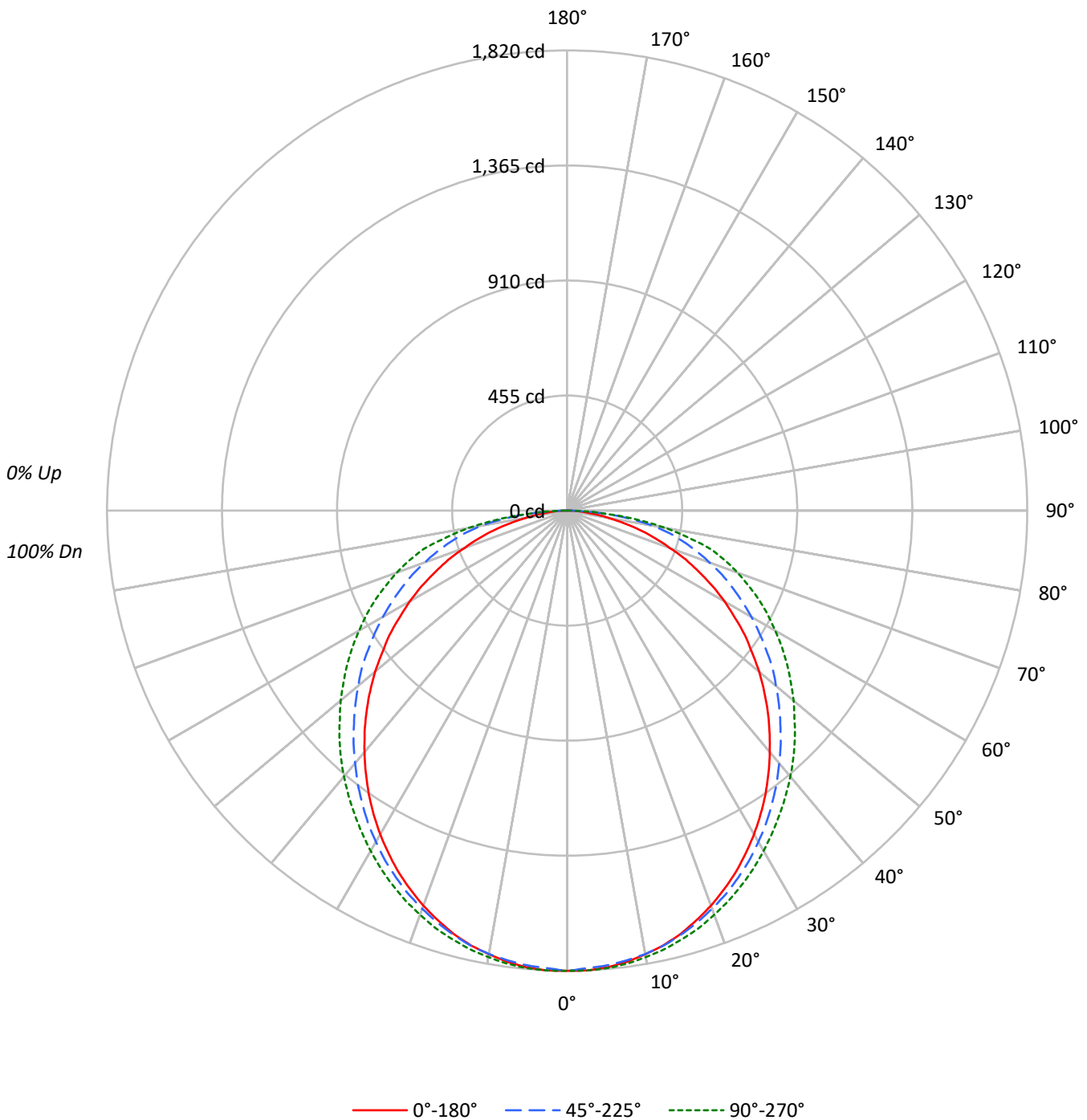
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2449	2449	2449
5°	2449	2439	2454
10°	2435	2433	2450
15°	2415	2420	2445
20°	2381	2399	2436
25°	2343	2378	2426
30°	2297	2350	2415
35°	2247	2321	2407
40°	2190	2292	2412
45°	2135	2269	2424
50°	2076	2258	2447
55°	2012	2254	2492
60°	1933	2264	2556
65°	1832	2299	2667
70°	1701	2356	2819
75°	1552	2474	3057
80°	1276	2664	3057
85°	977	2458	2626



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.2	3.2
10°-20°	491.5	9.1
20°-30°	739.7	13.6
30°-40°	886.4	16.3
40°-50°	923.7	17.0
50°-60°	859.4	15.9
60°-70°	707.8	13.1
70°-80°	482.1	8.9
80°-90°	159.2	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°	1403.4	25.9
0°-40°	2289.8	42.2
0°-60°	4072.9	75.1
0°-90°	5422.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5422.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1820	1820	1820	1820	1820	
5°	1813	1813	1806	1815	1817	172
15°	1734	1735	1737	1754	1755	488
25°	1578	1585	1602	1629	1634	726
35°	1368	1384	1413	1451	1466	855
45°	1122	1146	1192	1252	1274	865
55°	858	887	961	1037	1062	765
65°	575	624	722	807	838	571
75°	299	366	476	561	588	315
85°	63	123	159	170	170	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1820.4	1820.4	1820.4	1820.4	1820.4
2.5°	1820.4	1820.4	1811.4	1820.4	1820.4
5°	1813.2	1813.2	1805.9	1815.0	1816.8
7.5°	1800.5	1802.3	1795.1	1805.9	1807.8
10°	1782.4	1784.2	1780.6	1791.5	1793.3
12.5°	1760.7	1762.5	1762.5	1775.2	1777.0
15°	1733.6	1735.4	1737.2	1753.5	1755.3
17.5°	1699.2	1704.6	1708.2	1728.1	1731.7
20°	1663.0	1668.4	1675.7	1697.4	1701.0
22.5°	1621.4	1628.6	1641.3	1664.8	1670.2
25°	1577.9	1585.2	1601.5	1628.6	1634.0
27.5°	1529.1	1539.9	1559.8	1588.8	1596.0
30°	1478.4	1489.3	1512.8	1543.6	1554.4
32.5°	1424.1	1438.6	1465.7	1500.1	1511.0
35°	1368.0	1384.3	1413.3	1451.3	1465.7
37.5°	1308.3	1326.4	1360.8	1402.4	1420.5
40°	1246.8	1268.5	1304.7	1353.6	1373.5
42.5°	1185.3	1205.2	1250.4	1302.9	1324.6
45°	1121.9	1145.5	1192.5	1252.2	1273.9
47.5°	1056.8	1080.3	1136.4	1199.7	1219.6
50°	991.6	1015.2	1078.5	1145.5	1169.0
52.5°	921.1	951.8	1024.2	1091.2	1114.7
55°	857.7	886.7	960.9	1036.9	1062.2
57.5°	785.3	819.7	901.2	980.8	1007.9
60°	718.4	754.6	841.4	922.9	950.0
62.5°	649.6	689.4	781.7	865.0	895.7
65°	575.4	624.3	722.0	807.1	837.8
67.5°	508.5	559.2	662.3	749.2	776.3
70°	432.5	494.0	599.0	685.8	716.6
72.5°	367.3	428.9	539.2	624.3	655.1
75°	298.6	365.5	475.9	561.0	588.1
77.5°	229.8	304.0	414.4	479.5	488.6
80°	164.7	242.5	343.8	381.8	394.5
82.5°	115.8	186.4	253.3	278.7	285.9
85°	63.3	123.1	159.2	170.1	170.1
87.5°	27.1	52.5	63.3	65.1	67.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)