

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: P389837

Luminaire Tested: **24CZ2-60VHE-S-UNV-L940-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: P389837
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-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5434.8 lumens
Efficiency: N/A
Efficacy: 140.4 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

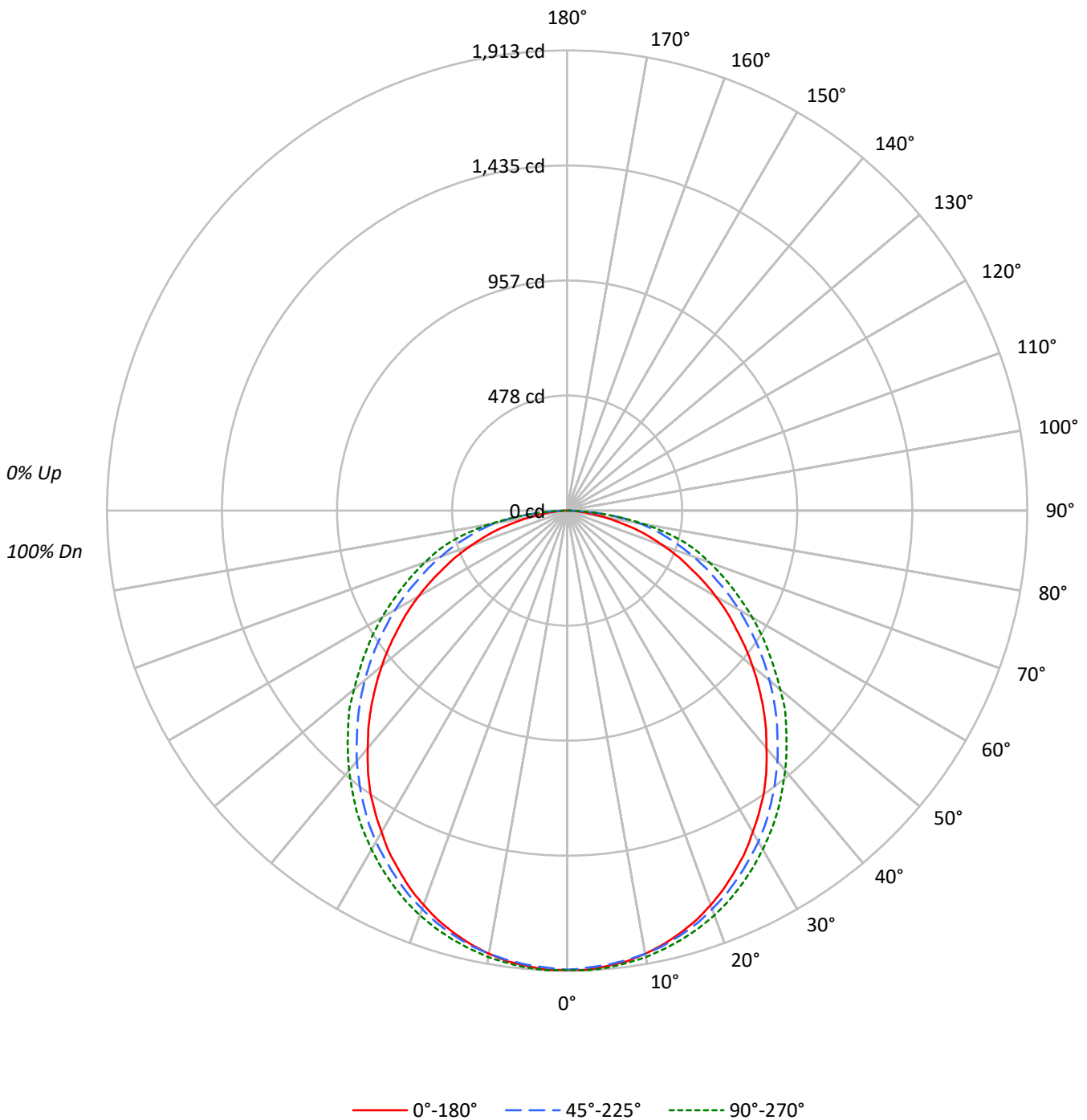
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2569	2569	2569
5°	2567	2560	2576
10°	2557	2557	2576
15°	2532	2544	2571
20°	2499	2524	2563
25°	2453	2499	2547
30°	2398	2470	2527
35°	2345	2430	2507
40°	2265	2389	2477
45°	2191	2342	2450
50°	2107	2298	2421
55°	2013	2255	2397
60°	1919	2221	2392
65°	1797	2182	2407
70°	1664	2194	2472
75°	1490	2234	2612
80°	1204	2368	2555
85°	906	2079	2025



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.8	3.3
10°-20°	516.5	9.5
20°-30°	776.4	14.3
30°-40°	924.8	17.0
40°-50°	946.5	17.4
50°-60°	852.1	15.7
60°-70°	669.2	12.3
70°-80°	434.3	8.0
80°-90°	134.3	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°	1473.6	27.1
0°-40°	2398.4	44.1
0°-60°	4197.0	77.2
0°-90°	5434.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5434.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1909	1909	1909	1909	1909	
5°	1901	1904	1896	1906	1908	181
15°	1818	1823	1826	1842	1845	513
25°	1652	1666	1683	1711	1716	761
35°	1428	1445	1479	1516	1526	891
45°	1151	1179	1231	1278	1288	888
55°	858	896	962	1012	1022	769
65°	564	608	685	742	756	562
75°	287	342	430	488	502	303
85°	59	109	135	131	131	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1909.3	1909.3	1909.3	1909.3	1909.3
2.5°	1911.0	1911.0	1902.4	1911.0	1912.7
5°	1900.6	1904.1	1895.5	1905.8	1907.6
7.5°	1890.3	1890.3	1885.1	1895.5	1897.2
10°	1871.3	1873.0	1871.3	1883.4	1885.1
12.5°	1847.1	1850.6	1852.3	1864.4	1866.1
15°	1817.8	1823.0	1826.4	1842.0	1845.4
17.5°	1785.0	1790.2	1798.8	1816.1	1819.5
20°	1745.3	1752.2	1762.5	1785.0	1790.2
22.5°	1702.1	1709.0	1726.3	1747.0	1755.6
25°	1652.1	1665.9	1683.1	1710.8	1715.9
27.5°	1602.0	1614.1	1636.5	1665.9	1672.8
30°	1543.3	1562.3	1589.9	1619.3	1626.2
32.5°	1486.3	1505.3	1538.1	1569.2	1577.8
35°	1427.6	1444.9	1479.4	1515.7	1526.0
37.5°	1360.3	1382.8	1420.7	1457.0	1467.3
40°	1289.5	1317.2	1360.3	1398.3	1410.4
42.5°	1222.2	1251.6	1294.7	1336.2	1350.0
45°	1151.4	1179.1	1230.8	1277.5	1287.8
47.5°	1078.9	1110.0	1165.2	1211.9	1229.1
50°	1006.4	1039.2	1097.9	1146.3	1156.6
52.5°	933.9	968.5	1030.6	1082.4	1087.6
55°	858.0	895.9	961.5	1011.6	1022.0
57.5°	788.9	821.7	892.5	944.3	956.4
60°	713.0	749.2	825.2	873.5	889.0
62.5°	640.5	678.4	757.8	806.2	820.0
65°	564.5	607.7	685.3	742.3	756.1
67.5°	498.9	540.3	623.2	678.4	692.2
70°	422.9	469.6	557.6	614.6	628.4
72.5°	357.3	405.7	493.7	549.0	569.7
75°	286.6	341.8	429.8	488.5	502.4
77.5°	217.5	281.4	371.2	416.0	416.0
80°	155.4	222.7	305.6	326.3	329.7
82.5°	101.9	167.5	226.1	224.4	224.4
85°	58.7	108.8	134.7	131.2	131.2
87.5°	22.4	44.9	48.3	48.3	46.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)