

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: P389834

Luminaire Tested: **24CZ2-60VHE-S-UNV-L935-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: P389834
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-L935-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5379.1 lumens
Efficiency: N/A
Efficacy: 139.0 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

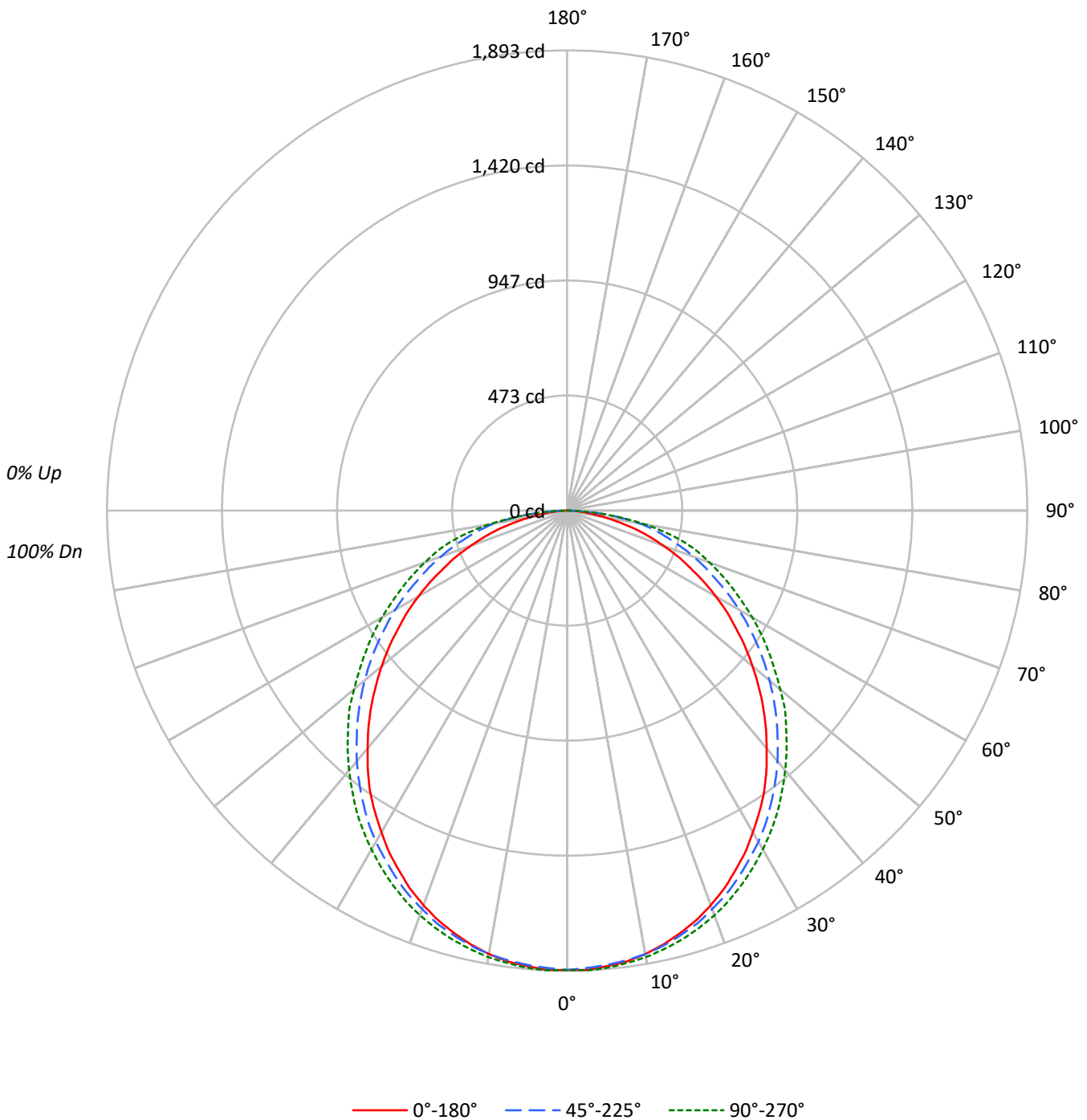
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2543	2543	2543
5°	2541	2534	2550
10°	2530	2530	2549
15°	2506	2518	2544
20°	2473	2498	2537
25°	2427	2473	2521
30°	2373	2445	2501
35°	2321	2405	2481
40°	2242	2365	2452
45°	2168	2318	2425
50°	2085	2275	2396
55°	1992	2232	2373
60°	1899	2198	2368
65°	1779	2160	2383
70°	1647	2171	2447
75°	1474	2211	2585
80°	1192	2343	2528
85°	897	2058	2005



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.9	3.3
10°-20°	511.2	9.5
20°-30°	768.4	14.3
30°-40°	915.3	17.0
40°-50°	936.8	17.4
50°-60°	843.4	15.7
60°-70°	662.3	12.3
70°-80°	429.8	8.0
80°-90°	132.9	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°	1458.5	27.1
0°-40°	2373.8	44.1
0°-60°	4154.0	77.2
0°-90°	5379.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5379.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1890	1890	1890	1890	1890	
5°	1881	1885	1876	1886	1888	179
15°	1799	1804	1808	1823	1826	507
25°	1635	1649	1666	1693	1698	753
35°	1413	1430	1464	1500	1510	882
45°	1140	1167	1218	1264	1275	879
55°	849	887	952	1001	1012	761
65°	559	601	678	735	748	556
75°	284	338	425	484	497	300
85°	58	108	133	130	130	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1889.7	1889.7	1889.7	1889.7	1889.7
2.5°	1891.4	1891.4	1882.9	1891.4	1893.1
5°	1881.2	1884.6	1876.0	1886.3	1888.0
7.5°	1870.9	1870.9	1865.8	1876.0	1877.8
10°	1852.1	1853.8	1852.1	1864.1	1865.8
12.5°	1828.2	1831.6	1833.3	1845.3	1847.0
15°	1799.2	1804.3	1807.7	1823.1	1826.5
17.5°	1766.7	1771.8	1780.4	1797.4	1800.9
20°	1727.4	1734.2	1744.5	1766.7	1771.8
22.5°	1684.7	1691.5	1708.6	1729.1	1737.6
25°	1635.1	1648.8	1665.9	1693.2	1698.3
27.5°	1585.6	1597.5	1619.8	1648.8	1655.6
30°	1527.5	1546.3	1573.6	1602.7	1609.5
32.5°	1471.1	1489.9	1522.4	1553.1	1561.7
35°	1413.0	1430.1	1464.3	1500.2	1510.4
37.5°	1346.4	1368.6	1406.2	1442.1	1452.3
40°	1276.3	1303.7	1346.4	1384.0	1395.9
42.5°	1209.7	1238.7	1281.5	1322.5	1336.1
45°	1139.6	1167.0	1218.2	1264.4	1274.6
47.5°	1067.9	1098.6	1153.3	1199.4	1216.5
50°	996.1	1028.6	1086.7	1134.5	1144.8
52.5°	924.4	958.5	1020.0	1071.3	1076.4
55°	849.2	886.8	951.7	1001.2	1011.5
57.5°	780.8	813.3	883.3	934.6	946.6
60°	705.7	741.5	816.7	864.6	879.9
62.5°	633.9	671.5	750.1	797.9	811.6
65°	558.7	601.4	678.3	734.7	748.4
67.5°	493.8	534.8	616.8	671.5	685.1
70°	418.6	464.7	551.9	608.3	621.9
72.5°	353.7	401.5	488.7	543.3	563.8
75°	283.6	338.3	425.4	483.5	497.2
77.5°	215.3	278.5	367.3	411.8	411.8
80°	153.8	220.4	302.4	322.9	326.3
82.5°	100.8	165.7	223.8	222.1	222.1
85°	58.1	107.6	133.3	129.9	129.9
87.5°	22.2	44.4	47.8	47.8	46.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)