

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: P389839

Luminaire Tested: **24CZ2-60VHE-S-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: P389839
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-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5697.1 lumens
Efficiency: N/A
Efficacy: 147.2 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

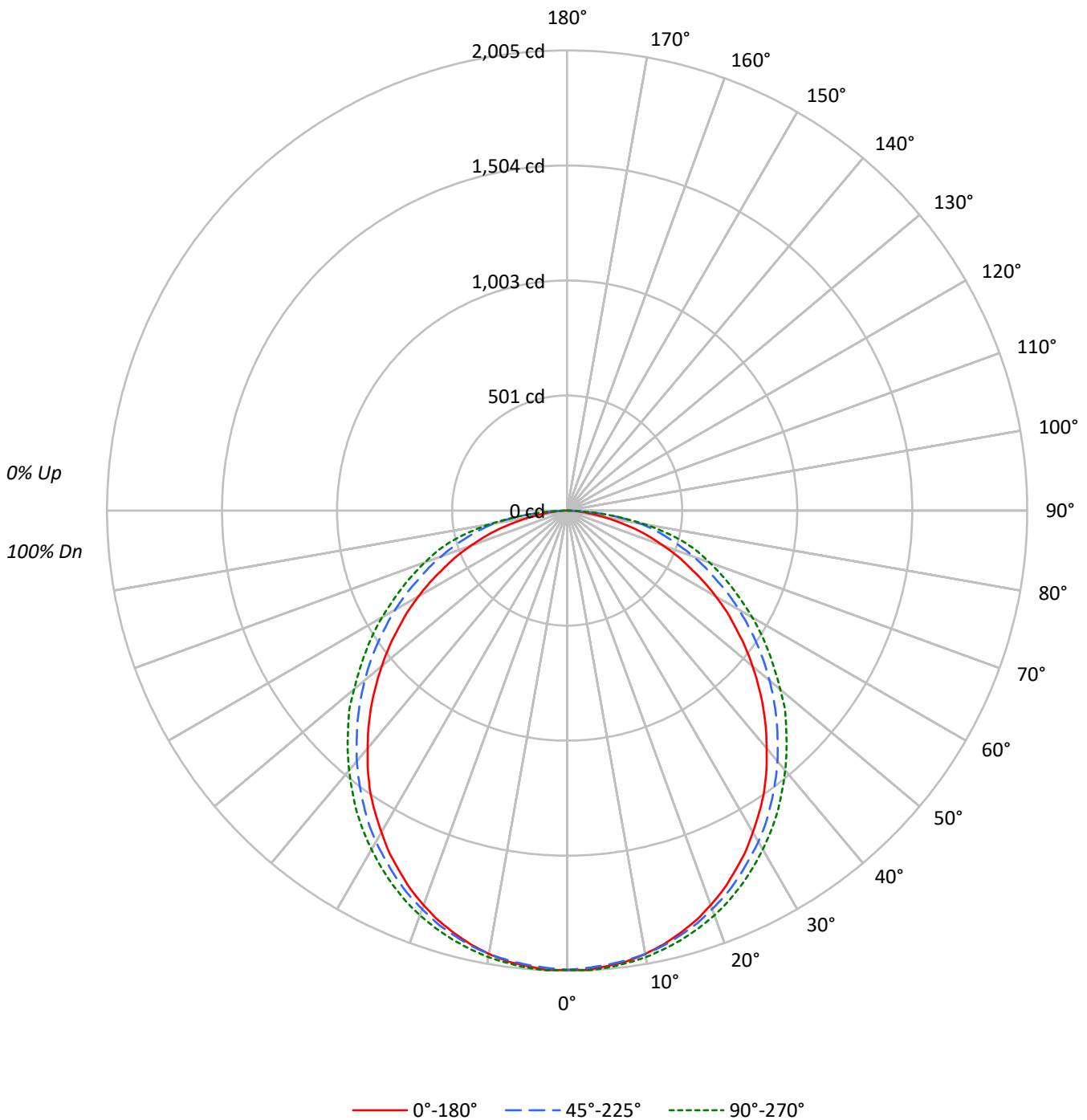
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2693	2693	2693
5°	2691	2684	2701
10°	2680	2680	2700
15°	2654	2667	2695
20°	2620	2645	2687
25°	2571	2619	2670
30°	2513	2589	2648
35°	2458	2547	2628
40°	2374	2505	2597
45°	2297	2455	2569
50°	2208	2409	2538
55°	2110	2365	2513
60°	2011	2328	2508
65°	1884	2287	2523
70°	1744	2299	2591
75°	1562	2342	2738
80°	1262	2482	2678
85°	949	2178	2123



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.5	3.3
10°-20°	541.4	9.5
20°-30°	813.9	14.3
30°-40°	969.4	17.0
40°-50°	992.2	17.4
50°-60°	893.2	15.7
60°-70°	701.5	12.3
70°-80°	455.3	8.0
80°-90°	140.8	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°	1544.7	27.1
0°-40°	2514.2	44.1
0°-60°	4399.6	77.2
0°-90°	5697.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5697.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2001	2001	2001	2001	2001	
5°	1992	1996	1987	1998	2000	189
15°	1906	1911	1915	1931	1934	537
25°	1732	1746	1764	1793	1799	798
35°	1496	1515	1551	1589	1600	934
45°	1207	1236	1290	1339	1350	931
55°	899	939	1008	1060	1071	806
65°	592	637	718	778	793	589
75°	300	358	451	512	527	318
85°	62	114	141	138	138	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2001.4	2001.4	2001.4	2001.4	2001.4
2.5°	2003.2	2003.2	1994.2	2003.2	2005.0
5°	1992.4	1996.0	1987.0	1997.8	1999.6
7.5°	1981.5	1981.5	1976.1	1987.0	1988.8
10°	1961.6	1963.4	1961.6	1974.3	1976.1
12.5°	1936.3	1939.9	1941.7	1954.4	1956.2
15°	1905.5	1910.9	1914.6	1930.9	1934.5
17.5°	1871.1	1876.6	1885.6	1903.7	1907.3
20°	1829.5	1836.8	1847.6	1871.1	1876.6
22.5°	1784.3	1791.5	1809.6	1831.3	1840.4
25°	1731.8	1746.3	1764.4	1793.3	1798.8
27.5°	1679.3	1692.0	1715.5	1746.3	1753.5
30°	1617.8	1637.7	1666.7	1697.4	1704.7
32.5°	1558.1	1578.0	1612.4	1644.9	1654.0
35°	1496.5	1514.6	1550.8	1588.8	1599.7
37.5°	1426.0	1449.5	1489.3	1527.3	1538.2
40°	1351.8	1380.7	1426.0	1465.8	1478.5
42.5°	1281.2	1312.0	1357.2	1400.6	1415.1
45°	1207.0	1236.0	1290.3	1339.1	1350.0
47.5°	1131.0	1163.6	1221.5	1270.3	1288.4
50°	1055.0	1089.4	1150.9	1201.6	1212.4
52.5°	979.0	1015.2	1080.3	1134.6	1140.1
55°	899.4	939.2	1008.0	1060.4	1071.3
57.5°	827.0	861.4	935.6	989.9	1002.5
60°	747.4	785.4	865.0	915.7	931.9
62.5°	671.4	711.2	794.4	845.1	859.6
65°	591.7	637.0	718.4	778.1	792.6
67.5°	523.0	566.4	653.3	711.2	725.7
70°	443.4	492.2	584.5	644.2	658.7
72.5°	374.6	425.3	517.5	575.5	597.2
75°	300.4	358.3	450.6	512.1	526.6
77.5°	228.0	295.0	389.1	436.1	436.1
80°	162.9	233.4	320.3	342.0	345.6
82.5°	106.8	175.5	237.1	235.2	235.2
85°	61.5	114.0	141.1	137.5	137.5
87.5°	23.5	47.0	50.7	50.7	48.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)