

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: P388942

Luminaire Tested: **24CZ2-70VHE-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: P388942
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: 24CZ2-70VHE-UNV-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5751.9 lumens
Efficiency: N/A
Efficacy: 125.9 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

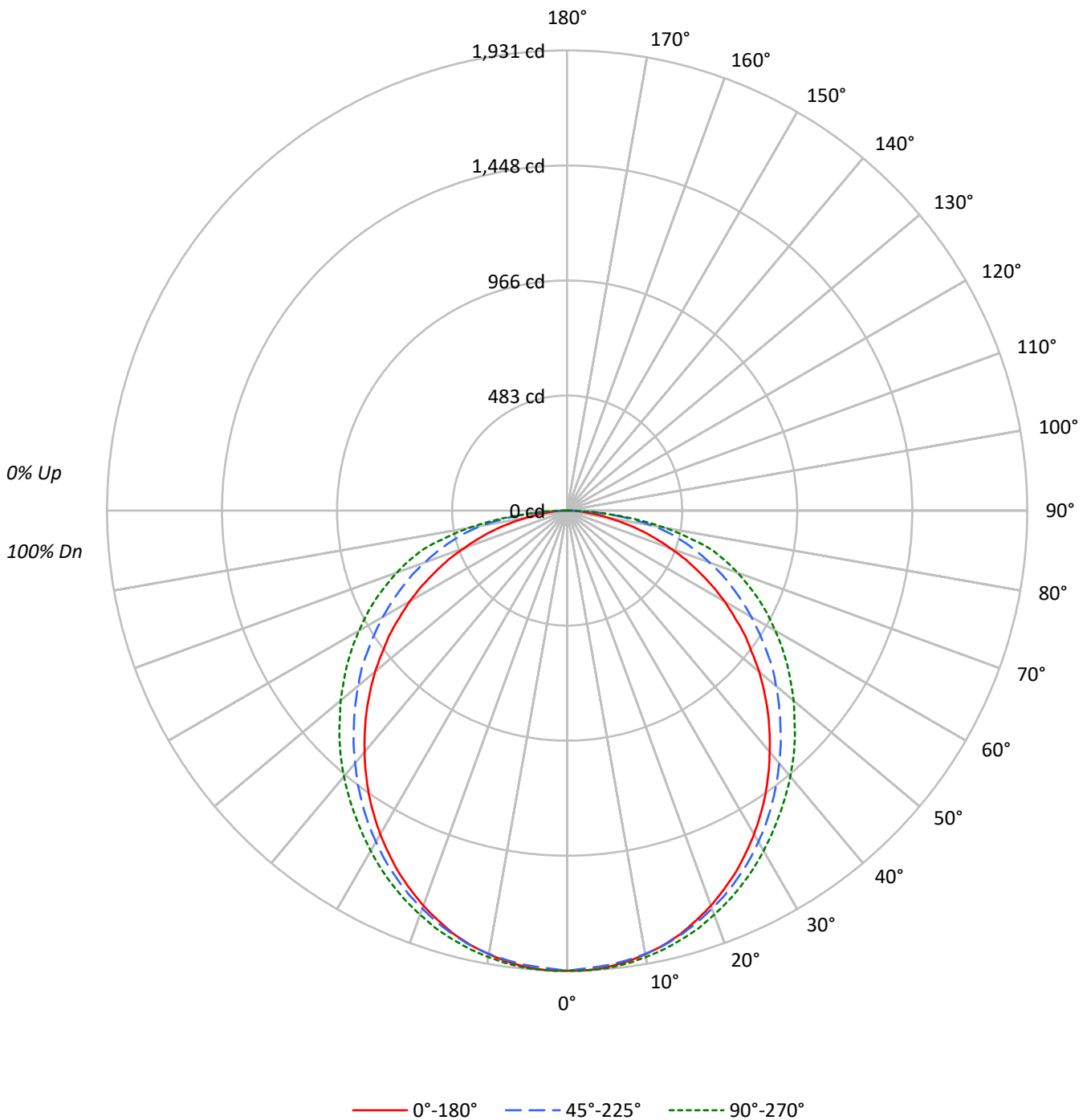
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2598	2598	2598
5°	2598	2588	2603
10°	2583	2581	2599
15°	2562	2567	2594
20°	2526	2545	2584
25°	2485	2522	2574
30°	2437	2493	2562
35°	2384	2463	2554
40°	2323	2431	2559
45°	2265	2407	2571
50°	2202	2395	2596
55°	2134	2391	2643
60°	2051	2402	2712
65°	1944	2438	2830
70°	1805	2500	2991
75°	1646	2625	3243
80°	1354	2826	3243
85°	1037	2607	2785



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.6	3.2
10°-20°	521.4	9.1
20°-30°	784.7	13.6
30°-40°	940.3	16.3
40°-50°	979.9	17.0
50°-60°	911.7	15.9
60°-70°	750.9	13.1
70°-80°	511.4	8.9
80°-90°	168.8	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°	1488.7	25.9
0°-40°	2429.1	42.2
0°-60°	4320.7	75.1
0°-90°	5751.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5751.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1931	1931	1931	1931	1931	
5°	1924	1924	1916	1925	1927	183
15°	1839	1841	1843	1860	1862	518
25°	1674	1682	1699	1728	1734	771
35°	1451	1468	1499	1540	1555	907
45°	1190	1215	1265	1328	1351	918
55°	910	941	1019	1100	1127	811
65°	610	662	766	856	889	606
75°	317	388	505	595	624	334
85°	67	130	169	180	180	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1931.2	1931.2	1931.2	1931.2	1931.2
2.5°	1931.2	1931.2	1921.6	1931.2	1931.2
5°	1923.5	1923.5	1915.8	1925.4	1927.3
7.5°	1910.1	1912.0	1904.3	1915.8	1917.7
10°	1890.9	1892.8	1888.9	1900.5	1902.4
12.5°	1867.8	1869.8	1869.8	1883.2	1885.1
15°	1839.0	1841.0	1842.9	1860.2	1862.1
17.5°	1802.6	1808.3	1812.2	1833.3	1837.1
20°	1764.2	1769.9	1777.6	1800.6	1804.5
22.5°	1720.0	1727.7	1741.1	1766.1	1771.8
25°	1673.9	1681.6	1698.9	1727.7	1733.5
27.5°	1622.1	1633.6	1654.7	1685.5	1693.1
30°	1568.4	1579.9	1604.8	1637.5	1649.0
32.5°	1510.8	1526.1	1554.9	1591.4	1602.9
35°	1451.3	1468.5	1499.3	1539.6	1554.9
37.5°	1387.9	1407.1	1443.6	1487.7	1506.9
40°	1322.6	1345.7	1384.1	1435.9	1457.0
42.5°	1257.4	1278.5	1326.5	1382.2	1405.2
45°	1190.2	1215.1	1265.1	1328.4	1351.4
47.5°	1121.1	1146.0	1205.5	1272.7	1293.9
50°	1052.0	1076.9	1144.1	1215.1	1240.1
52.5°	977.1	1009.7	1086.5	1157.6	1182.5
55°	909.9	940.6	1019.3	1100.0	1126.8
57.5°	833.1	869.6	956.0	1040.5	1069.3
60°	762.1	800.5	892.6	979.0	1007.8
62.5°	689.2	731.4	829.3	917.6	950.2
65°	610.5	662.3	765.9	856.2	888.8
67.5°	539.4	593.2	702.6	794.7	823.5
70°	458.8	524.1	635.4	727.6	760.2
72.5°	389.7	455.0	572.1	662.3	694.9
75°	316.7	387.8	504.9	595.1	623.9
77.5°	243.8	322.5	439.6	508.7	518.3
80°	174.7	257.2	364.7	405.0	418.5
82.5°	122.9	197.7	268.8	295.6	303.3
85°	67.2	130.5	168.9	180.4	180.4
87.5°	28.8	55.7	67.2	69.1	71.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)