

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: P388948

Luminaire Tested: **24CZ2-70VHE-UNV-L940-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: P388948
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-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5955.2 lumens
Efficiency: N/A
Efficacy: 130.3 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

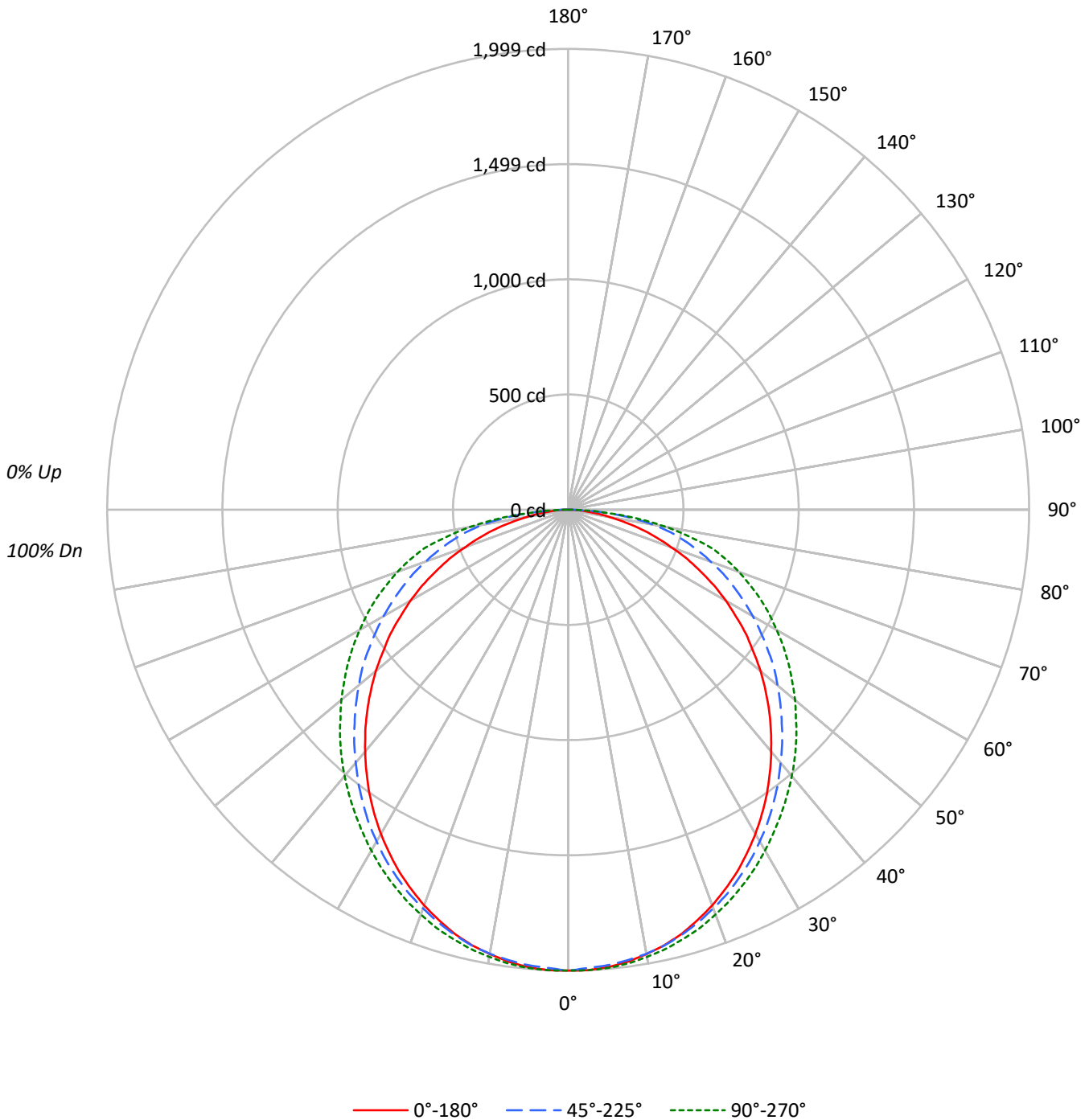
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2690	2690	2690
5°	2690	2679	2695
10°	2675	2672	2691
15°	2652	2658	2685
20°	2615	2635	2675
25°	2573	2611	2664
30°	2523	2582	2653
35°	2468	2550	2644
40°	2405	2517	2650
45°	2345	2492	2662
50°	2280	2480	2687
55°	2210	2476	2737
60°	2123	2487	2808
65°	2012	2525	2930
70°	1869	2588	3096
75°	1705	2717	3358
80°	1402	2926	3357
85°	1074	2700	2884



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.1	3.2
10°-20°	539.9	9.1
20°-30°	812.4	13.6
30°-40°	973.6	16.3
40°-50°	1014.6	17.0
50°-60°	943.9	15.9
60°-70°	777.4	13.1
70°-80°	529.5	8.9
80°-90°	174.8	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°	1541.4	25.9
0°-40°	2514.9	42.2
0°-60°	4473.5	75.1
0°-90°	5955.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5955.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1999	1999	1999	1999	1999	
5°	1992	1992	1984	1994	1996	189
15°	1904	1906	1908	1926	1928	536
25°	1733	1741	1759	1789	1795	798
35°	1503	1520	1552	1594	1610	939
45°	1232	1258	1310	1375	1399	950
55°	942	974	1055	1139	1167	840
65°	632	686	793	886	920	627
75°	328	402	523	616	646	346
85°	70	135	175	187	187	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1999.4	1999.4	1999.4	1999.4	1999.4
2.5°	1999.4	1999.4	1989.5	1999.4	1999.4
5°	1991.5	1991.5	1983.5	1993.5	1995.5
7.5°	1977.6	1979.6	1971.6	1983.5	1985.5
10°	1957.7	1959.7	1955.7	1967.6	1969.6
12.5°	1933.8	1935.8	1935.8	1949.7	1951.7
15°	1904.0	1906.0	1908.0	1925.9	1927.9
17.5°	1866.3	1872.2	1876.2	1898.1	1902.0
20°	1826.5	1832.5	1840.4	1864.3	1868.3
22.5°	1780.8	1788.8	1802.7	1828.5	1834.5
25°	1733.1	1741.1	1758.9	1788.8	1794.7
27.5°	1679.4	1691.4	1713.2	1745.0	1753.0
30°	1623.8	1635.7	1661.6	1695.3	1707.3
32.5°	1564.2	1580.1	1609.9	1647.6	1659.6
35°	1502.6	1520.4	1552.2	1594.0	1609.9
37.5°	1437.0	1456.8	1494.6	1540.3	1560.2
40°	1369.4	1393.2	1433.0	1486.7	1508.5
42.5°	1301.8	1323.7	1373.4	1431.0	1454.9
45°	1232.3	1258.1	1309.8	1375.4	1399.2
47.5°	1160.7	1186.5	1248.2	1317.7	1339.6
50°	1089.2	1115.0	1184.6	1258.1	1283.9
52.5°	1011.6	1045.4	1124.9	1198.5	1224.3
55°	942.1	973.9	1055.4	1138.8	1166.7
57.5°	862.6	900.3	989.8	1077.2	1107.0
60°	789.0	828.8	924.2	1013.6	1043.4
62.5°	713.5	757.2	858.6	950.0	983.8
65°	632.0	685.7	793.0	886.4	920.2
67.5°	558.5	614.1	727.4	822.8	852.6
70°	475.0	542.6	657.9	753.3	787.1
72.5°	403.5	471.0	592.3	685.7	719.5
75°	327.9	401.5	522.7	616.1	645.9
77.5°	252.4	333.9	455.1	526.7	536.6
80°	180.9	266.3	377.6	419.4	433.3
82.5°	127.2	204.7	278.3	306.1	314.0
85°	69.6	135.2	174.9	186.8	186.8
87.5°	29.8	57.6	69.6	71.6	73.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)