

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: P388945

Luminaire Tested: **24CZ2-70VHE-UNV-L935-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: P388945
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-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5894.2 lumens
Efficiency: N/A
Efficacy: 129.0 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

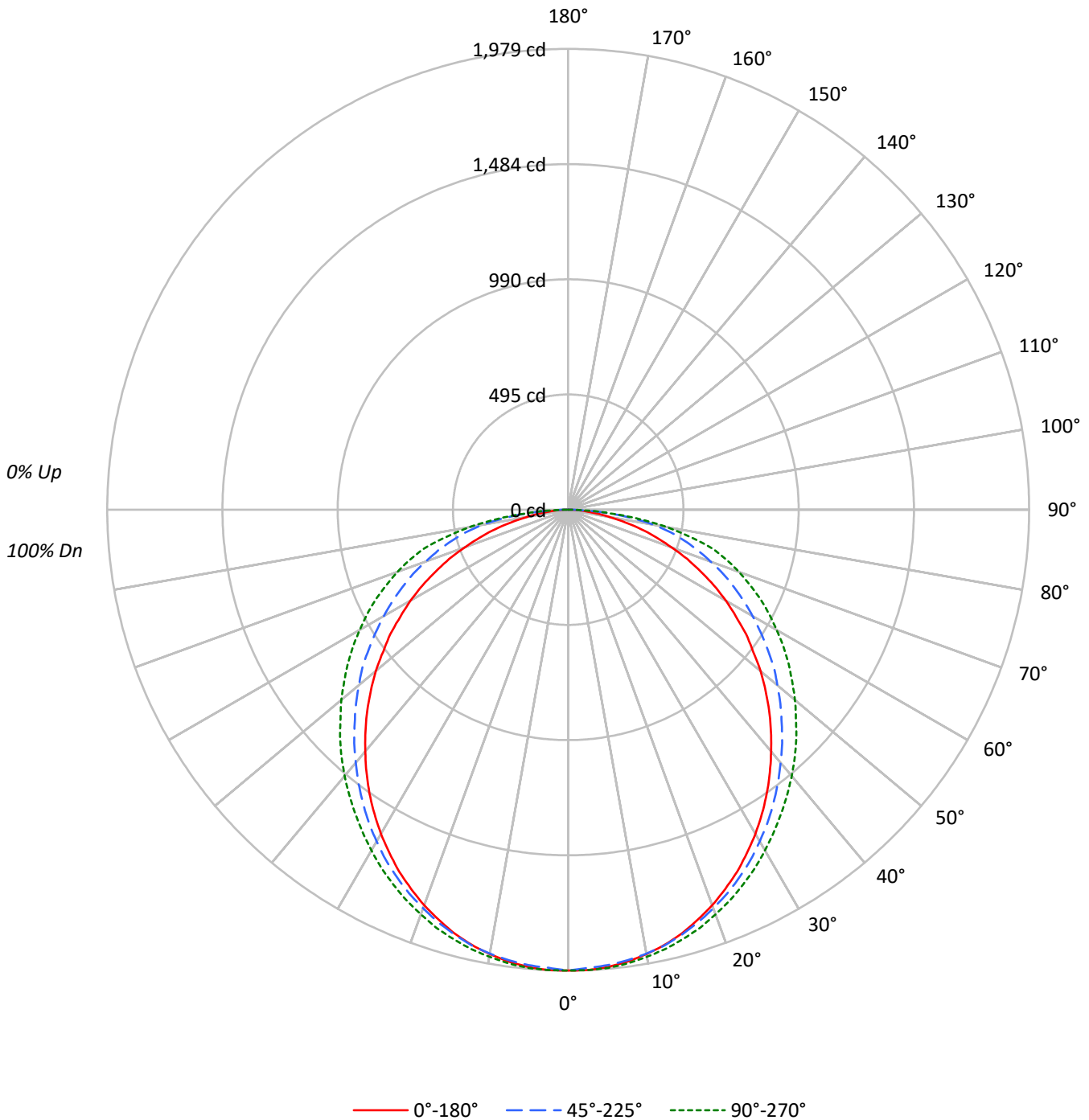
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67					67			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56					56			
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36					36			
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32					32			
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25					25			
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2663	2663	2663
5°	2662	2652	2667
10°	2647	2645	2663
15°	2625	2631	2658
20°	2588	2608	2648
25°	2547	2585	2637
30°	2497	2555	2625
35°	2443	2523	2617
40°	2381	2491	2622
45°	2321	2467	2635
50°	2256	2454	2660
55°	2187	2450	2709
60°	2102	2461	2779
65°	1992	2499	2900
70°	1849	2561	3065
75°	1687	2690	3323
80°	1387	2896	3322
85°	1064	2672	2854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.2	3.2
10°-20°	534.3	9.1
20°-30°	804.1	13.6
30°-40°	963.6	16.3
40°-50°	1004.2	17.0
50°-60°	934.3	15.9
60°-70°	769.5	13.1
70°-80°	524.1	8.9
80°-90°	173.0	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°	1525.6	25.9
0°-40°	2489.2	42.2
0°-60°	4427.6	75.1
0°-90°	5894.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5894.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1979	1979	1979	1979	1979	
5°	1971	1971	1963	1973	1975	187
15°	1884	1886	1888	1906	1908	531
25°	1715	1723	1741	1770	1776	790
35°	1487	1505	1536	1578	1593	930
45°	1220	1245	1296	1361	1385	941
55°	932	964	1045	1127	1155	831
65°	626	679	785	877	911	621
75°	325	397	517	610	639	342
85°	69	134	173	185	185	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1979.0	1979.0	1979.0	1979.0	1979.0
2.5°	1979.0	1979.0	1969.1	1979.0	1979.0
5°	1971.1	1971.1	1963.2	1973.1	1975.0
7.5°	1957.3	1959.3	1951.4	1963.2	1965.2
10°	1937.6	1939.6	1935.7	1947.5	1949.4
12.5°	1914.0	1916.0	1916.0	1929.8	1931.7
15°	1884.5	1886.5	1888.5	1906.2	1908.1
17.5°	1847.2	1853.1	1857.0	1878.6	1882.6
20°	1807.8	1813.7	1821.6	1845.2	1849.1
22.5°	1762.6	1770.4	1784.2	1809.8	1815.7
25°	1715.4	1723.2	1740.9	1770.4	1776.3
27.5°	1662.2	1674.0	1695.7	1727.2	1735.0
30°	1607.2	1619.0	1644.5	1678.0	1689.8
32.5°	1548.2	1563.9	1593.4	1630.8	1642.6
35°	1487.2	1504.9	1536.3	1577.7	1593.4
37.5°	1422.3	1441.9	1479.3	1524.5	1544.2
40°	1355.4	1379.0	1418.3	1471.4	1493.1
42.5°	1288.5	1310.1	1359.3	1416.4	1440.0
45°	1219.6	1245.2	1296.4	1361.3	1384.9
47.5°	1148.8	1174.4	1235.4	1304.2	1325.9
50°	1078.0	1103.6	1172.4	1245.2	1270.8
52.5°	1001.3	1034.7	1113.4	1186.2	1211.8
55°	932.4	963.9	1044.6	1127.2	1154.7
57.5°	853.7	891.1	979.6	1066.2	1095.7
60°	781.0	820.3	914.7	1003.2	1032.8
62.5°	706.2	749.5	849.8	940.3	973.7
65°	625.6	678.7	784.9	877.4	910.8
67.5°	552.8	607.9	720.0	814.4	843.9
70°	470.1	537.0	651.1	745.6	779.0
72.5°	399.3	466.2	586.2	678.7	712.1
75°	324.6	397.4	517.4	609.8	639.3
77.5°	249.8	330.5	450.5	521.3	531.1
80°	179.0	263.6	373.8	415.1	428.8
82.5°	125.9	202.6	275.4	302.9	310.8
85°	68.9	133.8	173.1	184.9	184.9
87.5°	29.5	57.0	68.9	70.8	72.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)