

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: P389761

Luminaire Tested: **24CZ2-45VHE-S-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: P389761
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: 24CZ2-45VHE-S-UNV-L935-CD1-SWPD1-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: 3999.9 lumens
Efficiency: N/A
Efficacy: 135.1 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

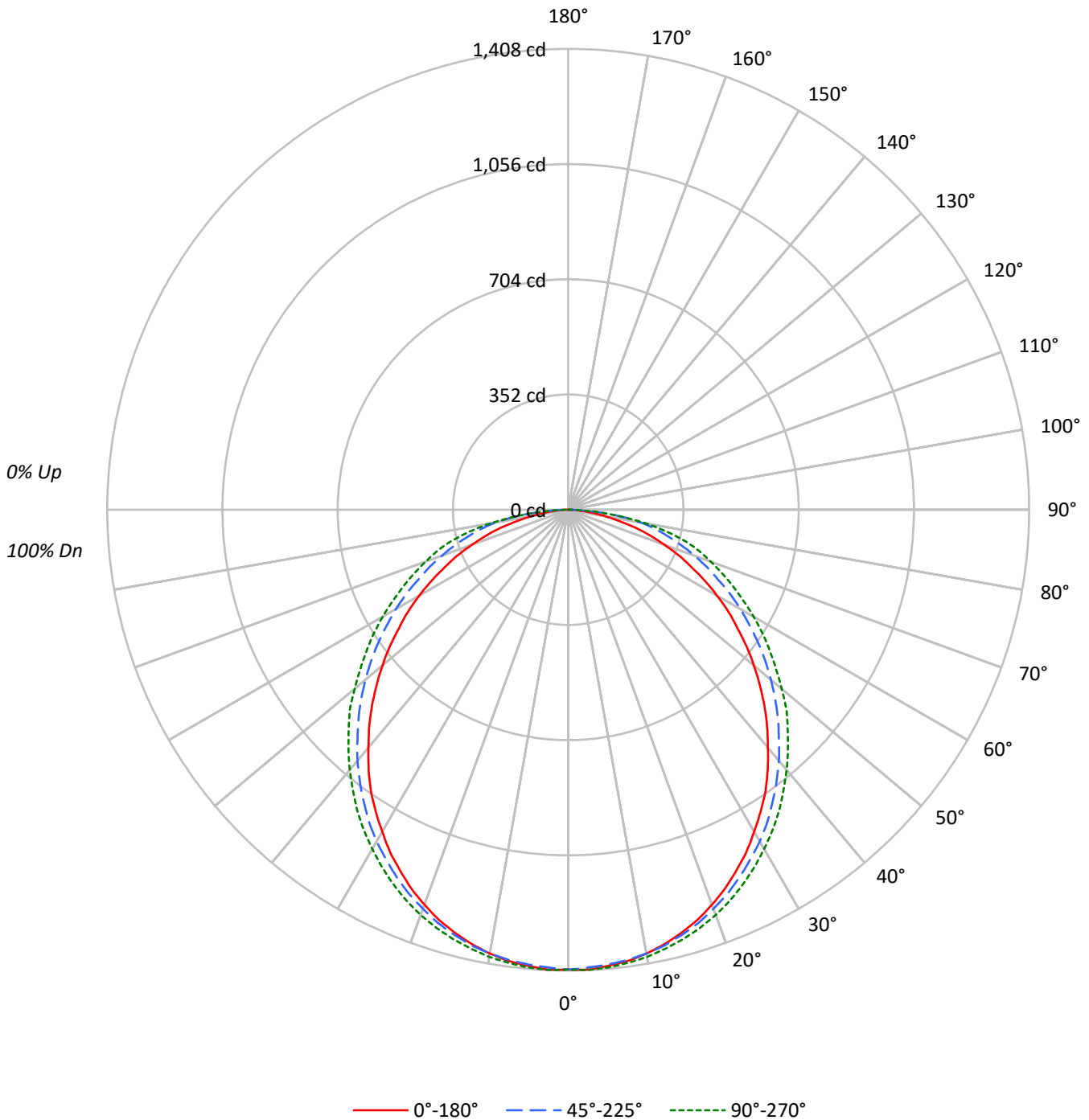
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1891	1891	1891
5°	1889	1884	1896
10°	1882	1882	1896
15°	1864	1872	1892
20°	1839	1857	1886
25°	1805	1839	1875
30°	1765	1818	1859
35°	1726	1788	1845
40°	1667	1759	1823
45°	1612	1724	1803
50°	1550	1691	1782
55°	1481	1660	1764
60°	1412	1634	1761
65°	1323	1606	1772
70°	1225	1614	1819
75°	1096	1645	1922
80°	886	1743	1881
85°	667	1530	1491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	3.3
10°-20°	380.1	9.5
20°-30°	571.4	14.3
30°-40°	680.6	17.0
40°-50°	696.6	17.4
50°-60°	627.1	15.7
60°-70°	492.5	12.3
70°-80°	319.7	8.0
80°-90°	98.9	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°	1084.5	27.1
0°-40°	1765.2	44.1
0°-60°	3088.9	77.2
0°-90°	3999.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3999.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1405	1405	1405	1405	1405	
5°	1399	1401	1395	1403	1404	133
15°	1338	1342	1344	1356	1358	377
25°	1216	1226	1239	1259	1263	560
35°	1051	1063	1089	1116	1123	655
45°	847	868	906	940	948	653
55°	631	659	708	744	752	566
65°	416	447	504	546	556	414
75°	211	252	316	360	370	223
85°	43	80	99	97	97	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1405.2	1405.2	1405.2	1405.2	1405.2
2.5°	1406.5	1406.5	1400.1	1406.5	1407.7
5°	1398.8	1401.4	1395.0	1402.6	1403.9
7.5°	1391.2	1391.2	1387.4	1395.0	1396.3
10°	1377.2	1378.5	1377.2	1386.1	1387.4
12.5°	1359.5	1362.0	1363.3	1372.2	1373.4
15°	1337.9	1341.7	1344.2	1355.6	1358.2
17.5°	1313.7	1317.5	1323.9	1336.6	1339.1
20°	1284.5	1289.6	1297.2	1313.7	1317.5
22.5°	1252.7	1257.8	1270.5	1285.8	1292.1
25°	1215.9	1226.0	1238.8	1259.1	1262.9
27.5°	1179.0	1187.9	1204.4	1226.0	1231.1
30°	1135.8	1149.8	1170.1	1191.7	1196.8
32.5°	1093.9	1107.9	1132.0	1154.9	1161.3
35°	1050.7	1063.4	1088.8	1115.5	1123.1
37.5°	1001.2	1017.7	1045.6	1072.3	1079.9
40°	949.1	969.4	1001.2	1029.1	1038.0
42.5°	899.5	921.1	952.9	983.4	993.5
45°	847.4	867.8	905.9	940.2	947.8
47.5°	794.1	816.9	857.6	891.9	904.6
50°	740.7	764.9	808.0	843.6	851.2
52.5°	687.3	712.8	758.5	796.6	800.4
55°	631.4	659.4	707.7	744.5	752.1
57.5°	580.6	604.8	656.9	695.0	703.9
60°	524.7	551.4	607.3	642.9	654.3
62.5°	471.4	499.3	557.8	593.3	603.5
65°	415.5	447.2	504.4	546.3	556.5
67.5°	367.2	397.7	458.7	499.3	509.5
70°	311.3	345.6	410.4	452.3	462.5
72.5°	263.0	298.6	363.4	404.0	419.3
75°	210.9	251.6	316.4	359.6	369.7
77.5°	160.1	207.1	273.2	306.2	306.2
80°	114.3	163.9	224.9	240.1	242.7
82.5°	75.0	123.2	166.4	165.2	165.2
85°	43.2	80.0	99.1	96.6	96.6
87.5°	16.5	33.0	35.6	35.6	34.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)