

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: P389758

Luminaire Tested: **24CZ2-45VHE-S-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: P389758
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-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3903.3 lumens
Efficiency: N/A
Efficacy: 131.9 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

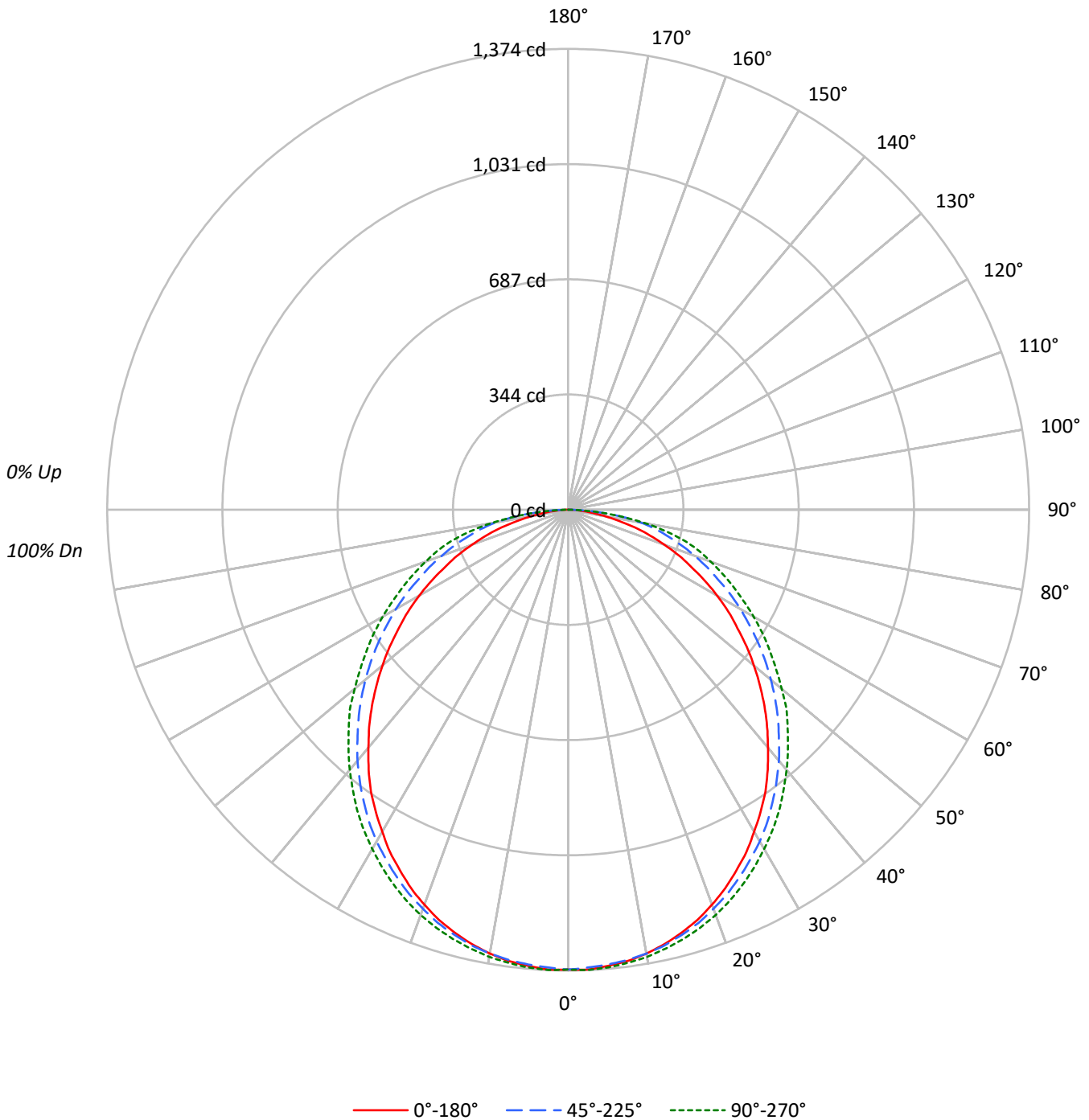
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1845	1845	1845
5°	1844	1839	1850
10°	1836	1836	1850
15°	1819	1827	1846
20°	1795	1813	1841
25°	1761	1795	1830
30°	1722	1774	1814
35°	1684	1745	1800
40°	1627	1716	1779
45°	1574	1682	1760
50°	1513	1650	1739
55°	1445	1620	1722
60°	1378	1595	1718
65°	1291	1567	1729
70°	1195	1576	1775
75°	1070	1605	1876
80°	865	1701	1835
85°	651	1493	1454



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.8	3.3
10°-20°	370.9	9.5
20°-30°	557.6	14.3
30°-40°	664.2	17.0
40°-50°	679.8	17.4
50°-60°	612.0	15.7
60°-70°	480.6	12.3
70°-80°	311.9	8.0
80°-90°	96.5	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°	1058.3	27.1
0°-40°	1722.5	44.1
0°-60°	3014.3	77.2
0°-90°	3903.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3903.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1371	1371	1371	1371	1371	
5°	1365	1368	1361	1369	1370	130
15°	1306	1309	1312	1323	1325	368
25°	1186	1196	1209	1229	1232	547
35°	1025	1038	1062	1089	1096	640
45°	827	847	884	918	925	638
55°	616	644	691	726	734	552
65°	405	436	492	533	543	404
75°	206	246	309	351	361	218
85°	42	78	97	94	94	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1371.3	1371.3	1371.3	1371.3	1371.3
2.5°	1372.5	1372.5	1366.3	1372.5	1373.7
5°	1365.1	1367.5	1361.3	1368.8	1370.0
7.5°	1357.6	1357.6	1353.9	1361.3	1362.6
10°	1344.0	1345.2	1344.0	1352.7	1353.9
12.5°	1326.6	1329.1	1330.3	1339.0	1340.3
15°	1305.5	1309.3	1311.7	1322.9	1325.4
17.5°	1282.0	1285.7	1291.9	1304.3	1306.8
20°	1253.5	1258.4	1265.9	1282.0	1285.7
22.5°	1222.5	1227.4	1239.8	1254.7	1260.9
25°	1186.5	1196.4	1208.8	1228.7	1232.4
27.5°	1150.6	1159.2	1175.4	1196.4	1201.4
30°	1108.4	1122.0	1141.9	1163.0	1167.9
32.5°	1067.5	1081.1	1104.7	1127.0	1133.2
35°	1025.3	1037.7	1062.5	1088.6	1096.0
37.5°	977.0	993.1	1020.4	1046.4	1053.9
40°	926.2	946.0	977.0	1004.3	1012.9
42.5°	877.8	898.9	929.9	959.6	969.5
45°	827.0	846.8	884.0	917.5	924.9
47.5°	774.9	797.2	836.9	870.4	882.8
50°	722.8	746.4	788.5	823.2	830.7
52.5°	670.7	695.5	740.2	777.4	781.1
55°	616.2	643.5	690.6	726.5	734.0
57.5°	566.6	590.2	641.0	678.2	686.9
60°	512.1	538.1	592.6	627.4	638.5
62.5°	460.0	487.3	544.3	579.0	588.9
65°	405.4	436.4	492.2	533.1	543.0
67.5°	358.3	388.1	447.6	487.3	497.2
70°	303.8	337.2	400.5	441.4	451.3
72.5°	256.6	291.4	354.6	394.3	409.1
75°	205.8	245.5	308.7	350.9	360.8
77.5°	156.2	202.1	266.6	298.8	298.8
80°	111.6	159.9	219.5	234.3	236.8
82.5°	73.2	120.3	162.4	161.2	161.2
85°	42.2	78.1	96.7	94.2	94.2
87.5°	16.1	32.2	34.7	34.7	33.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)