

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: P389768

Luminaire Tested: **24CZ2-45VHE-S-UNV-L950-CD1-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: P389768
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-L950-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4343.4 lumens
Efficiency: N/A
Efficacy: 146.7 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

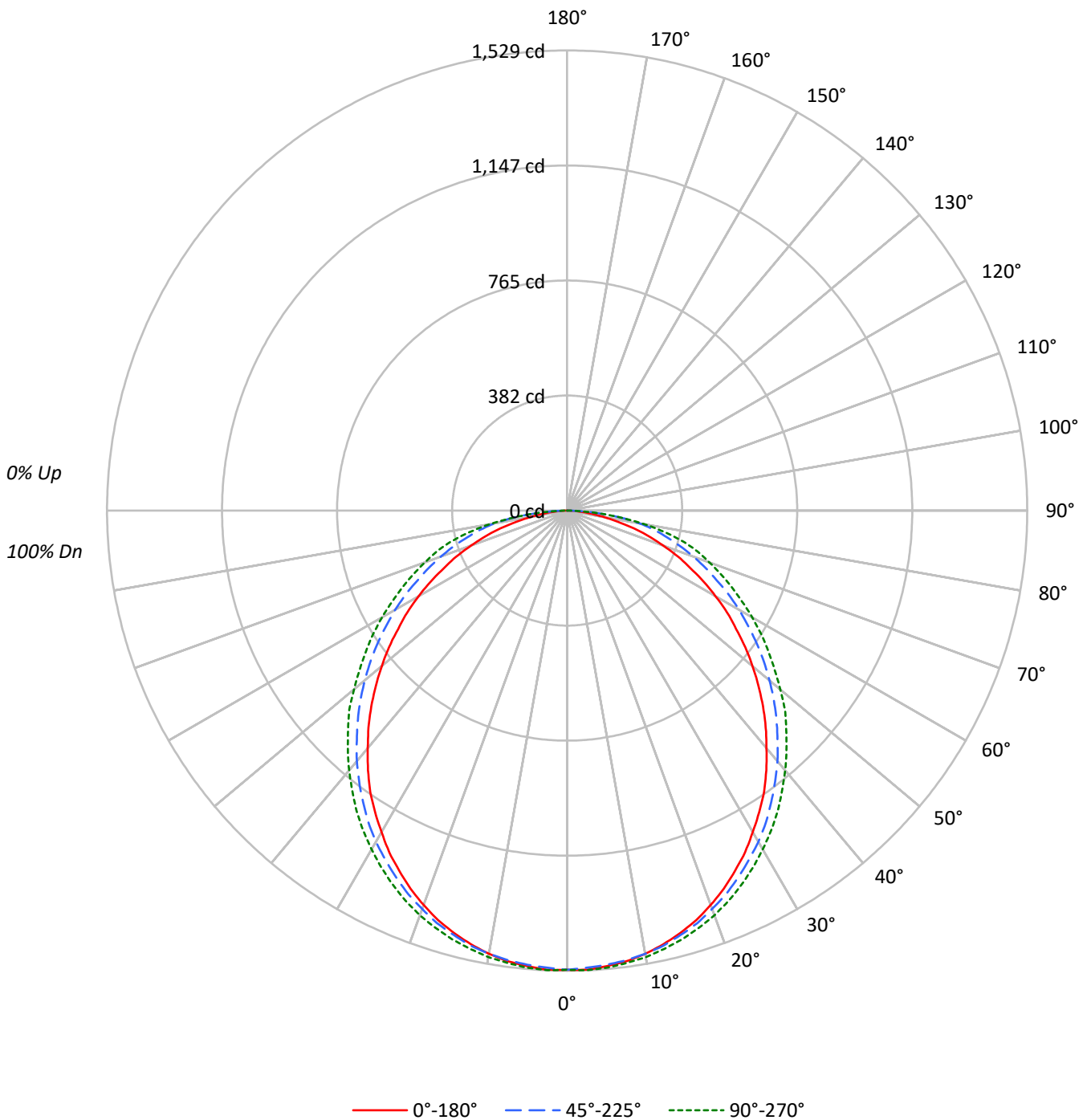
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2053	2053	2053
5°	2052	2046	2059
10°	2043	2043	2058
15°	2024	2033	2054
20°	1997	2017	2049
25°	1960	1997	2036
30°	1916	1974	2019
35°	1874	1942	2003
40°	1810	1909	1980
45°	1751	1872	1958
50°	1684	1837	1935
55°	1609	1803	1916
60°	1533	1775	1912
65°	1436	1744	1924
70°	1330	1753	1976
75°	1190	1786	2087
80°	962	1892	2042
85°	724	1661	1619



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.5	3.3
10°-20°	412.8	9.5
20°-30°	620.5	14.3
30°-40°	739.1	17.0
40°-50°	756.4	17.4
50°-60°	681.0	15.7
60°-70°	534.8	12.3
70°-80°	347.1	8.0
80°-90°	107.3	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°	1177.7	27.1
0°-40°	1916.7	44.1
0°-60°	3354.2	77.2
0°-90°	4343.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4343.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1526	1526	1526	1526	1526	
5°	1519	1522	1515	1523	1524	144
15°	1453	1457	1460	1472	1475	410
25°	1320	1331	1345	1367	1371	608
35°	1141	1155	1182	1211	1220	712
45°	920	942	984	1021	1029	709
55°	686	716	768	808	817	615
65°	451	486	548	593	604	449
75°	229	273	344	390	402	242
85°	47	87	108	105	105	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1525.9	1525.9	1525.9	1525.9	1525.9
2.5°	1527.2	1527.2	1520.3	1527.2	1528.6
5°	1519.0	1521.7	1514.8	1523.1	1524.5
7.5°	1510.7	1510.7	1506.6	1514.8	1516.2
10°	1495.5	1496.9	1495.5	1505.2	1506.6
12.5°	1476.2	1479.0	1480.3	1490.0	1491.4
15°	1452.7	1456.9	1459.6	1472.1	1474.8
17.5°	1426.5	1430.7	1437.6	1451.4	1454.1
20°	1394.8	1400.3	1408.6	1426.5	1430.7
22.5°	1360.3	1365.8	1379.6	1396.2	1403.1
25°	1320.3	1331.3	1345.1	1367.2	1371.3
27.5°	1280.3	1289.9	1307.9	1331.3	1336.9
30°	1233.4	1248.6	1270.6	1294.1	1299.6
32.5°	1187.9	1203.0	1229.2	1254.1	1261.0
35°	1140.9	1154.7	1182.3	1211.3	1219.6
37.5°	1087.1	1105.1	1135.4	1164.4	1172.7
40°	1030.6	1052.7	1087.1	1117.5	1127.2
42.5°	976.8	1000.2	1034.7	1067.8	1078.9
45°	920.2	942.3	983.7	1020.9	1029.2
47.5°	862.3	887.1	931.2	968.5	982.3
50°	804.3	830.5	877.4	916.1	924.3
52.5°	746.4	774.0	823.6	865.0	869.2
55°	685.7	716.0	768.5	808.5	816.7
57.5°	630.5	656.7	713.3	754.7	764.3
60°	569.8	598.8	659.5	698.1	710.5
62.5°	511.8	542.2	605.7	644.3	655.3
65°	451.1	485.6	547.7	593.2	604.3
67.5°	398.7	431.8	498.0	542.2	553.2
70°	338.0	375.3	445.6	491.1	502.2
72.5°	285.6	324.2	394.6	438.7	455.3
75°	229.0	273.2	343.5	390.4	401.5
77.5°	173.8	224.9	296.6	332.5	332.5
80°	124.2	178.0	244.2	260.7	263.5
82.5°	81.4	133.8	180.7	179.4	179.4
85°	46.9	86.9	107.6	104.9	104.9
87.5°	17.9	35.9	38.6	38.6	37.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)