

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: P388732

Luminaire Tested: **24CZ2-45VHE-SQR-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: P388732
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45VHE-SQR-UNV-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3655.9 lumens
Efficiency: N/A
Efficacy: 123.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

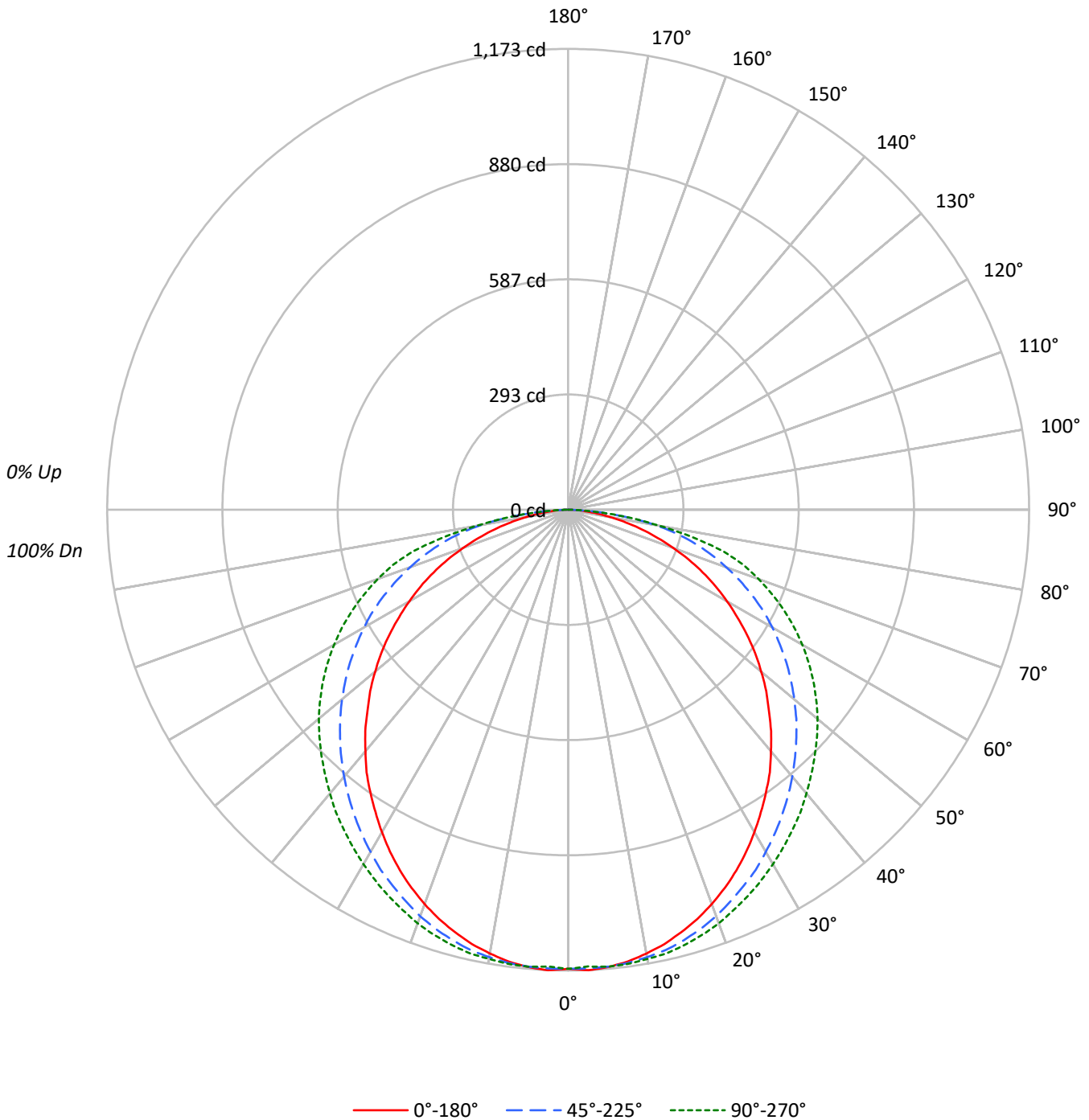
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1572	1572	1572
5°	1578	1577	1577
10°	1567	1580	1587
15°	1550	1581	1598
20°	1530	1576	1604
25°	1504	1568	1609
30°	1472	1562	1619
35°	1442	1559	1634
40°	1410	1558	1656
45°	1374	1562	1688
50°	1342	1572	1734
55°	1303	1589	1787
60°	1257	1615	1852
65°	1203	1645	1929
70°	1116	1686	2028
75°	1011	1745	2121
80°	852	1750	1824
85°	653	1323	1323



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.9	3.0
10°-20°	319.2	8.7
20°-30°	484.8	13.3
30°-40°	589.7	16.1
40°-50°	627.8	17.2
50°-60°	597.9	16.4
60°-70°	500.0	13.7
70°-80°	333.4	9.1
80°-90°	92.2	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°	914.8	25.0
0°-40°	1504.5	41.2
0°-60°	2730.2	74.7
0°-90°	3655.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3655.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1169	1169	1169	1169	1169	
5°	1169	1161	1167	1167	1167	111
15°	1113	1116	1135	1143	1147	314
25°	1013	1026	1056	1074	1084	466
35°	878	903	949	980	995	549
45°	722	761	821	867	887	558
55°	555	604	677	736	762	496
65°	378	433	517	581	606	373
75°	194	256	336	392	408	206
85°	42	78	86	84	86	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.6	1168.6	1168.6	1168.6	1168.6
2.5°	1173.4	1165.0	1168.6	1168.6	1163.8
5°	1168.6	1161.4	1167.4	1167.4	1167.4
7.5°	1160.2	1154.1	1163.8	1166.2	1166.2
10°	1146.9	1144.5	1156.5	1160.2	1161.4
12.5°	1132.4	1131.2	1148.1	1152.9	1156.5
15°	1113.1	1115.5	1134.8	1143.3	1146.9
17.5°	1092.5	1097.4	1119.1	1131.2	1134.8
20°	1068.4	1075.6	1101.0	1113.1	1120.3
22.5°	1041.8	1052.7	1079.3	1093.8	1102.2
25°	1012.9	1026.1	1056.3	1074.4	1084.1
27.5°	981.5	998.4	1033.4	1053.9	1063.6
30°	947.7	967.0	1005.6	1029.8	1041.8
32.5°	912.7	935.6	977.9	1004.4	1018.9
35°	877.7	903.0	948.9	980.3	994.8
37.5°	842.7	868.0	918.7	952.5	970.6
40°	802.8	833.0	887.3	924.7	942.9
42.5°	764.2	796.8	854.7	895.8	915.1
45°	721.9	760.6	820.9	866.8	887.3
47.5°	683.3	721.9	787.1	835.4	858.3
50°	641.0	682.1	750.9	804.0	828.2
52.5°	600.0	642.2	714.7	771.4	795.6
55°	555.3	603.6	677.3	736.4	761.8
57.5°	510.7	562.6	638.6	700.2	725.5
60°	467.2	520.3	600.0	661.6	688.1
62.5°	423.7	476.9	560.2	622.9	648.3
65°	377.9	433.4	516.7	580.7	606.0
67.5°	332.0	389.9	473.2	537.2	561.4
70°	283.7	345.3	428.6	491.3	515.5
72.5°	239.0	300.6	382.7	444.3	467.2
75°	194.4	255.9	335.6	392.4	408.0
77.5°	150.9	212.5	283.7	321.1	324.7
80°	109.9	167.8	225.8	236.6	235.4
82.5°	73.6	125.6	155.7	156.9	160.6
85°	42.3	78.5	85.7	84.5	85.7
87.5°	16.9	27.8	24.1	18.1	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)