

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: P388729

Luminaire Tested: **24CZ2-45VHE-SQR-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: P388729
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-L930-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3567.7 lumens
Efficiency: N/A
Efficacy: 120.5 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

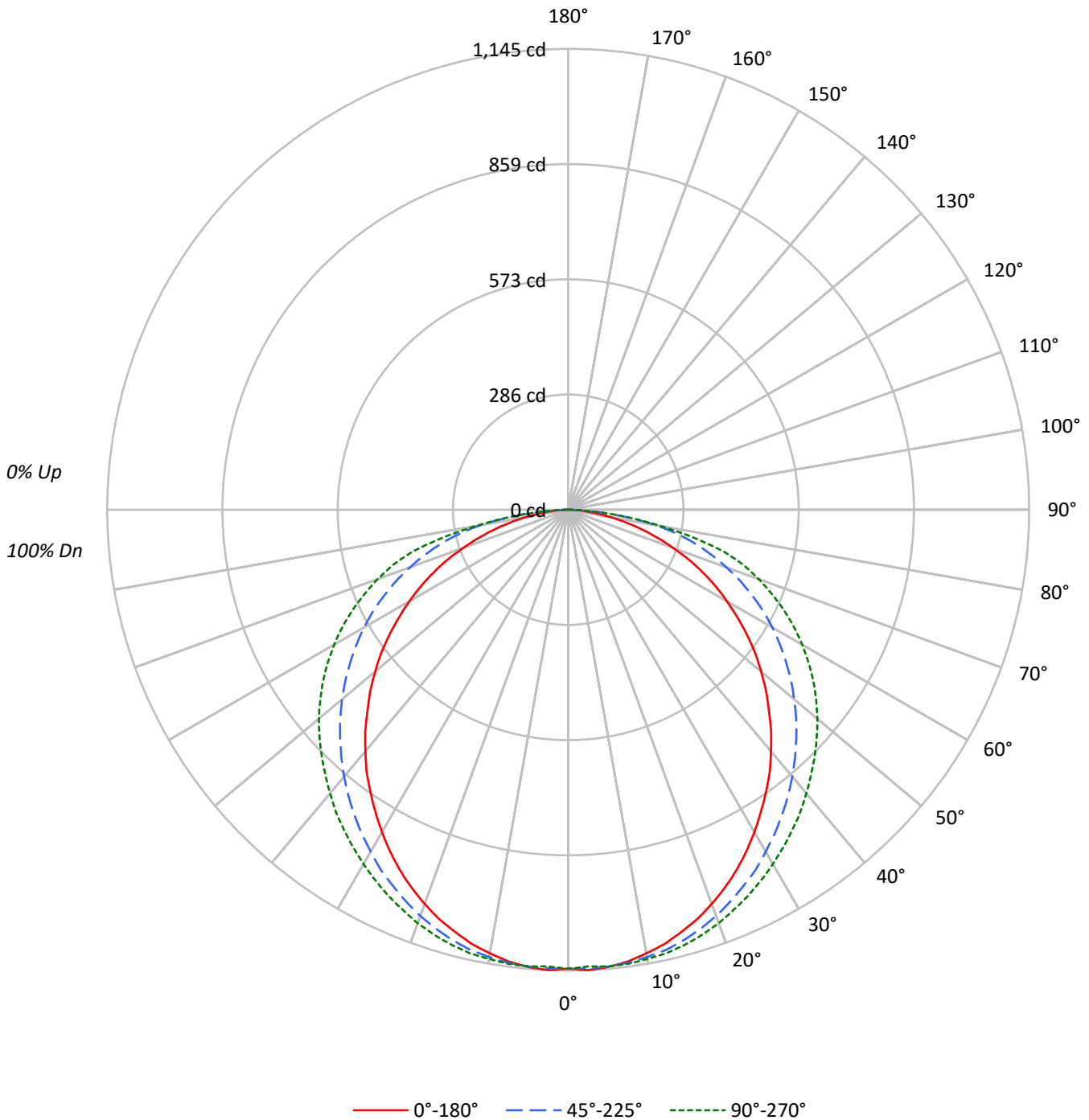
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1534	1534	1534
5°	1540	1539	1539
10°	1529	1542	1548
15°	1513	1543	1559
20°	1493	1538	1565
25°	1467	1530	1571
30°	1437	1525	1580
35°	1407	1521	1595
40°	1376	1521	1616
45°	1341	1524	1648
50°	1310	1534	1692
55°	1271	1550	1744
60°	1227	1576	1807
65°	1174	1605	1883
70°	1089	1645	1979
75°	986	1703	2070
80°	831	1707	1780
85°	636	1291	1291



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.3	3.0
10°-20°	311.5	8.7
20°-30°	473.1	13.3
30°-40°	575.4	16.1
40°-50°	612.6	17.2
50°-60°	583.5	16.4
60°-70°	488.0	13.7
70°-80°	325.3	9.1
80°-90°	90.0	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°	892.8	25.0
0°-40°	1468.2	41.2
0°-60°	2664.3	74.7
0°-90°	3567.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3567.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1140	1133	1139	1139	1139	108
15°	1086	1089	1107	1116	1119	306
25°	988	1001	1031	1048	1058	455
35°	856	881	926	957	971	536
45°	704	742	801	846	866	545
55°	542	589	661	719	743	484
65°	369	423	504	567	591	364
75°	190	250	328	383	398	201
85°	41	77	84	82	84	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1140.4	1140.4	1140.4	1140.4	1140.4
2.5°	1145.1	1136.9	1140.4	1140.4	1135.7
5°	1140.4	1133.3	1139.2	1139.2	1139.2
7.5°	1132.2	1126.3	1135.7	1138.1	1138.1
10°	1119.2	1116.8	1128.6	1132.2	1133.3
12.5°	1105.1	1103.9	1120.4	1125.1	1128.6
15°	1086.2	1088.6	1107.4	1115.7	1119.2
17.5°	1066.2	1070.9	1092.1	1103.9	1107.4
20°	1042.6	1049.7	1074.4	1086.2	1093.3
22.5°	1016.7	1027.3	1053.2	1067.4	1075.6
25°	988.4	1001.4	1030.8	1048.5	1057.9
27.5°	957.8	974.3	1008.5	1028.5	1037.9
30°	924.8	943.7	981.4	1004.9	1016.7
32.5°	890.7	913.0	954.3	980.2	994.3
35°	856.5	881.2	926.0	956.6	970.8
37.5°	822.3	847.1	896.5	929.5	947.2
40°	783.4	812.9	865.9	902.4	920.1
42.5°	745.7	777.6	834.1	874.2	893.0
45°	704.5	742.2	801.1	845.9	865.9
47.5°	666.8	704.5	768.1	815.3	837.6
50°	625.6	665.6	732.8	784.6	808.2
52.5°	585.5	626.8	697.4	752.8	776.4
55°	541.9	589.1	660.9	718.6	743.4
57.5°	498.3	549.0	623.2	683.3	708.0
60°	455.9	507.8	585.5	645.6	671.5
62.5°	413.5	465.4	546.6	607.9	632.6
65°	368.7	422.9	504.2	566.7	591.4
67.5°	324.0	380.5	461.8	524.3	547.8
70°	276.9	336.9	418.2	479.5	503.1
72.5°	233.3	293.3	373.5	433.5	455.9
75°	189.7	249.8	327.5	382.9	398.2
77.5°	147.3	207.3	276.9	313.4	316.9
80°	107.2	163.8	220.3	230.9	229.7
82.5°	71.9	122.5	152.0	153.2	156.7
85°	41.2	76.6	83.6	82.5	83.6
87.5°	16.5	27.1	23.6	17.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)