

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: P388680

Luminaire Tested: **24CZ2-45-SQR-UNV-L930-CD1-SDWPD1-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: P388680
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: 24CZ2-45-SQR-UNV-L930-CD1-SDWPD1-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: 3570.2 lumens
Efficiency: N/A
Efficacy: 83.2 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

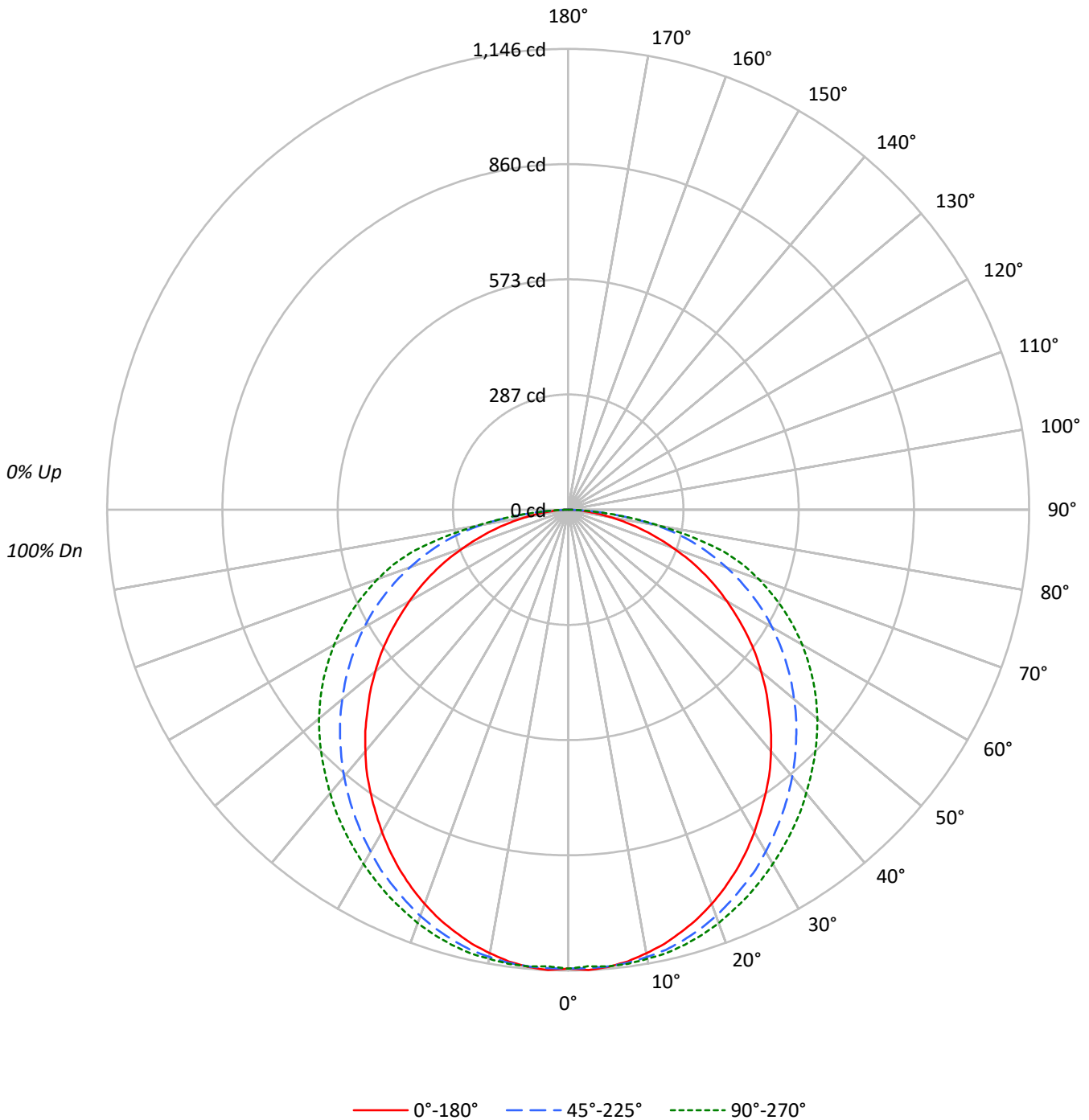
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1535	1535	1535
5°	1541	1540	1540
10°	1530	1543	1549
15°	1514	1544	1560
20°	1494	1540	1567
25°	1468	1531	1572
30°	1438	1526	1581
35°	1408	1522	1596
40°	1377	1522	1617
45°	1341	1525	1649
50°	1310	1535	1693
55°	1272	1552	1745
60°	1228	1577	1808
65°	1175	1606	1884
70°	1090	1646	1980
75°	987	1704	2072
80°	831	1709	1781
85°	638	1292	1292



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.3	3.0
10°-20°	311.7	8.7
20°-30°	473.4	13.3
30°-40°	575.8	16.1
40°-50°	613.1	17.2
50°-60°	583.9	16.4
60°-70°	488.3	13.7
70°-80°	325.6	9.1
80°-90°	90.1	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°	893.4	25.0
0°-40°	1469.2	41.2
0°-60°	2666.2	74.7
0°-90°	3570.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3570.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1141	1141	1141	1141	1141	
5°	1141	1134	1140	1140	1140	108
15°	1087	1089	1108	1116	1120	307
25°	989	1002	1032	1049	1059	455
35°	857	882	927	957	971	536
45°	705	743	802	846	866	545
55°	542	590	661	719	744	485
65°	369	423	505	567	592	365
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°	1141.2	1141.2	1141.2	1141.2	1141.2
2.5°	1145.9	1137.7	1141.2	1141.2	1136.5
5°	1141.2	1134.1	1140.0	1140.0	1140.0
7.5°	1133.0	1127.1	1136.5	1138.9	1138.9
10°	1120.0	1117.6	1129.4	1133.0	1134.1
12.5°	1105.8	1104.7	1121.2	1125.9	1129.4
15°	1087.0	1089.3	1108.2	1116.5	1120.0
17.5°	1066.9	1071.7	1092.9	1104.7	1108.2
20°	1043.4	1050.4	1075.2	1087.0	1094.1
22.5°	1017.4	1028.0	1054.0	1068.1	1076.4
25°	989.1	1002.1	1031.6	1049.3	1058.7
27.5°	958.5	975.0	1009.2	1029.2	1038.6
30°	925.5	944.3	982.1	1005.6	1017.4
32.5°	891.3	913.7	954.9	980.9	995.0
35°	857.1	881.8	926.6	957.3	971.4
37.5°	822.9	847.7	897.2	930.2	947.9
40°	784.0	813.5	866.5	903.1	920.7
42.5°	746.3	778.1	834.7	874.8	893.6
45°	705.0	742.7	801.7	846.5	866.5
47.5°	667.3	705.0	768.7	815.8	838.2
50°	626.0	666.1	733.3	785.2	808.7
52.5°	585.9	627.2	697.9	753.3	776.9
55°	542.3	589.5	661.4	719.2	743.9
57.5°	498.7	549.4	623.7	683.8	708.5
60°	456.2	508.1	585.9	646.1	672.0
62.5°	413.8	465.7	547.0	608.3	633.1
65°	369.0	423.2	504.6	567.1	591.8
67.5°	324.2	380.8	462.1	524.6	548.2
70°	277.0	337.2	418.5	479.8	503.4
72.5°	233.4	293.6	373.7	433.8	456.2
75°	189.8	249.9	327.7	383.2	398.5
77.5°	147.4	207.5	277.0	313.6	317.1
80°	107.3	163.9	220.5	231.1	229.9
82.5°	71.9	122.6	152.1	153.3	156.8
85°	41.3	76.6	83.7	82.5	83.7
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)