

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: P388778

Luminaire Tested: **24CZ2-50HE-SQR-UNV-L930-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: P388778
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: 24CZ2-50HE-SQR-UNV-L930-CD1-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: 3978.6 lumens
Efficiency: N/A
Efficacy: 103.1 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

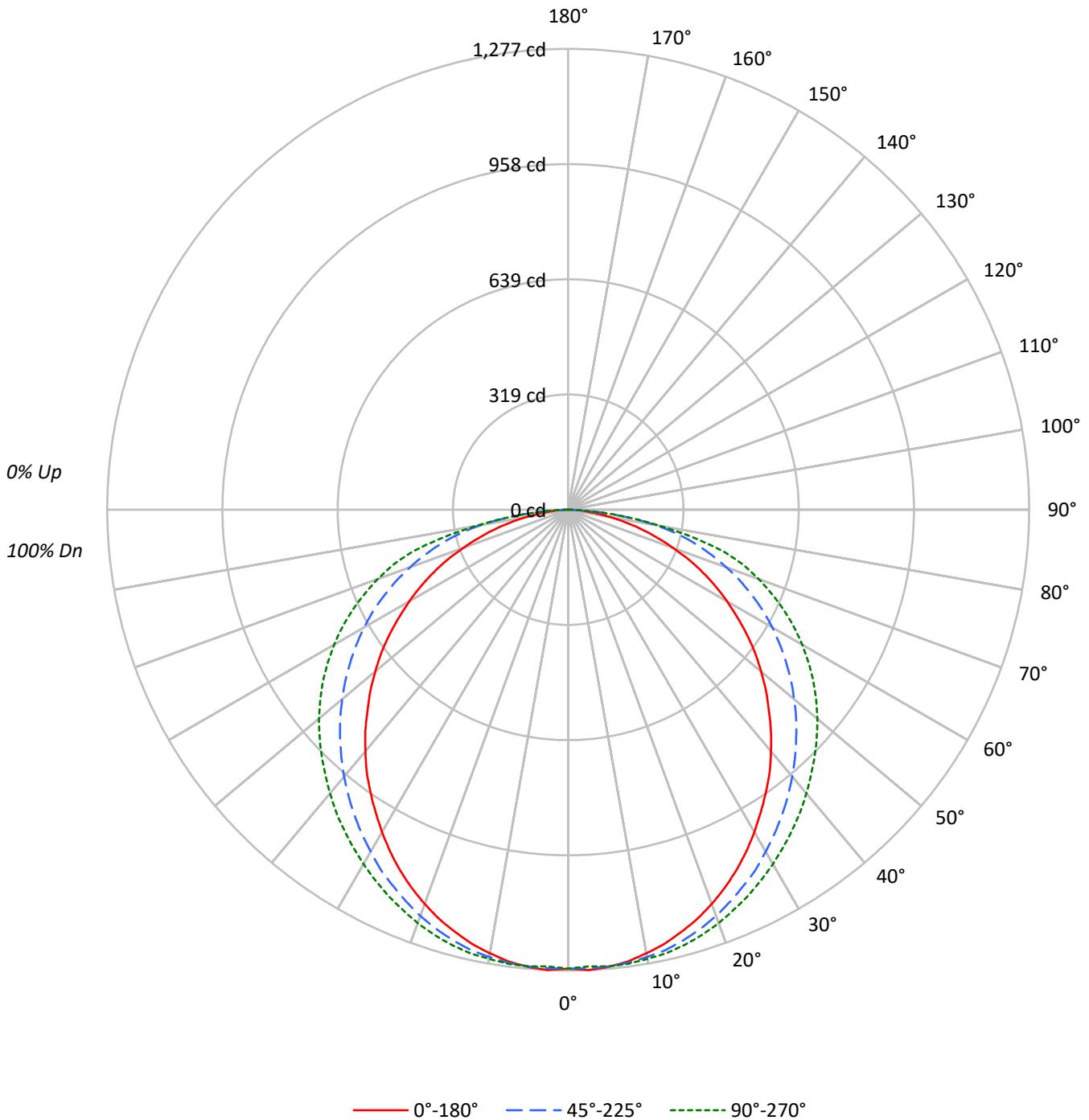
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1711	1711	1711
5°	1718	1716	1716
10°	1705	1720	1727
15°	1687	1720	1739
20°	1665	1716	1746
25°	1636	1707	1752
30°	1602	1700	1762
35°	1569	1696	1778
40°	1535	1696	1802
45°	1495	1700	1837
50°	1460	1711	1887
55°	1418	1729	1945
60°	1368	1757	2015
65°	1309	1790	2100
70°	1214	1835	2207
75°	1099	1899	2309
80°	927	1904	1985
85°	710	1440	1440



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	3.0
10°-20°	347.3	8.7
20°-30°	527.6	13.3
30°-40°	641.7	16.1
40°-50°	683.2	17.2
50°-60°	650.7	16.4
60°-70°	544.2	13.7
70°-80°	362.8	9.1
80°-90°	100.4	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°	995.6	25.0
0°-40°	1637.3	41.2
0°-60°	2971.2	74.7
0°-90°	3978.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3978.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1272	1272	1272	1272	1272	
5°	1272	1264	1270	1270	1270	121
15°	1211	1214	1235	1244	1248	342
25°	1102	1117	1150	1169	1180	508
35°	955	983	1033	1067	1083	598
45°	786	828	893	943	966	607
55°	604	657	737	801	829	540
65°	411	472	562	632	660	406
75°	212	278	365	427	444	224
85°	46	85	93	92	93	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1271.8	1271.8	1271.8	1271.8	1271.8
2.5°	1277.0	1267.8	1271.8	1271.8	1266.5
5°	1271.8	1263.9	1270.4	1270.4	1270.4
7.5°	1262.6	1256.0	1266.5	1269.1	1269.1
10°	1248.1	1245.5	1258.6	1262.6	1263.9
12.5°	1232.3	1231.0	1249.4	1254.7	1258.6
15°	1211.3	1213.9	1235.0	1244.2	1248.1
17.5°	1189.0	1194.2	1217.9	1231.0	1235.0
20°	1162.7	1170.6	1198.2	1211.3	1219.2
22.5°	1133.8	1145.6	1174.5	1190.3	1199.5
25°	1102.3	1116.7	1149.6	1169.3	1179.8
27.5°	1068.1	1086.5	1124.6	1146.9	1157.5
30°	1031.3	1052.4	1094.4	1120.7	1133.8
32.5°	993.2	1018.2	1064.2	1093.1	1108.8
35°	955.1	982.7	1032.6	1066.8	1082.6
37.5°	917.0	944.6	999.8	1036.6	1056.3
40°	873.7	906.5	965.6	1006.4	1026.1
42.5°	831.6	867.1	930.2	974.8	995.9
45°	785.6	827.7	893.4	943.3	965.6
47.5°	743.6	785.6	856.6	909.1	934.1
50°	697.6	742.3	817.2	875.0	901.3
52.5°	653.0	698.9	777.8	839.5	865.8
55°	604.3	656.9	737.0	801.4	829.0
57.5°	555.7	612.2	695.0	762.0	789.6
60°	508.4	566.2	653.0	720.0	748.9
62.5°	461.1	518.9	609.6	677.9	705.5
65°	411.2	471.7	562.3	631.9	659.5
67.5°	361.3	424.4	515.0	584.6	610.9
70°	308.7	375.7	466.4	534.7	561.0
72.5°	260.1	327.1	416.5	483.5	508.4
75°	211.5	278.5	365.2	427.0	444.1
77.5°	164.2	231.2	308.7	349.5	353.4
80°	119.6	182.6	245.7	257.5	256.2
82.5°	80.1	136.6	169.5	170.8	174.7
85°	46.0	85.4	93.3	92.0	93.3
87.5°	18.4	30.2	26.3	19.7	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)