

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: P388945

Luminaire Tested: **24CZ2-60VHE-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: P388945
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: 24CZ2-60VHE-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: 4738.4 lumens
Efficiency: N/A
Efficacy: 122.4 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

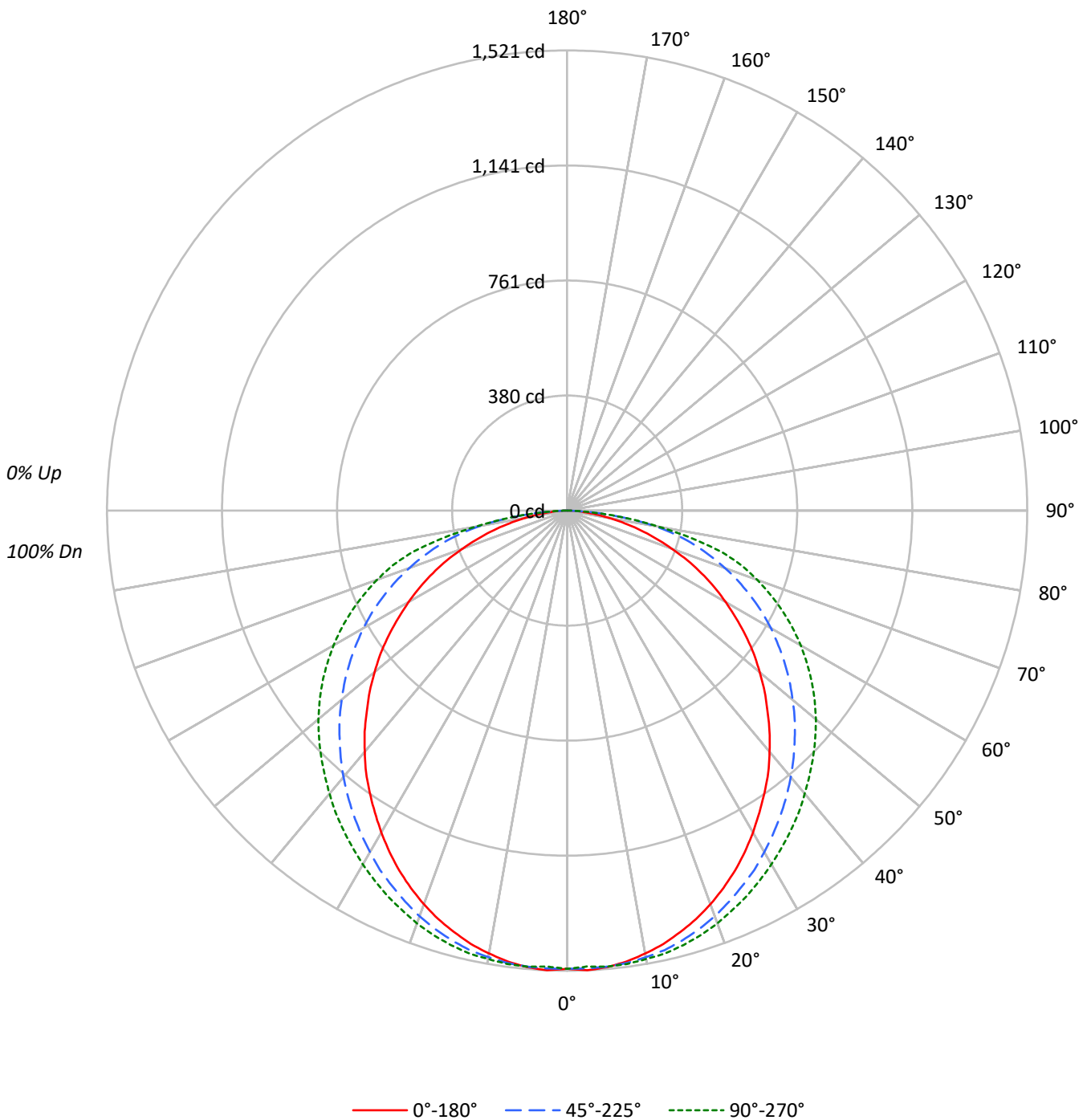
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2038	2038	2038
5°	2046	2044	2044
10°	2031	2048	2056
15°	2009	2049	2071
20°	1983	2043	2079
25°	1949	2033	2086
30°	1908	2025	2098
35°	1868	2020	2118
40°	1828	2020	2146
45°	1780	2025	2188
50°	1739	2037	2247
55°	1688	2059	2316
60°	1629	2093	2400
65°	1559	2132	2501
70°	1447	2185	2628
75°	1310	2261	2750
80°	1103	2267	2364
85°	846	1715	1715



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.8	3.0
10°-20°	413.6	8.7
20°-30°	628.3	13.3
30°-40°	764.2	16.1
40°-50°	813.7	17.2
50°-60°	775.0	16.4
60°-70°	648.1	13.7
70°-80°	432.1	9.1
80°-90°	119.6	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°	1185.7	25.0
0°-40°	1950.0	41.2
0°-60°	3538.6	74.7
0°-90°	4738.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4738.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1515	1515	1515	1515	1515	
5°	1515	1505	1513	1513	1513	144
15°	1443	1446	1471	1482	1486	407
25°	1313	1330	1369	1393	1405	604
35°	1138	1170	1230	1270	1289	712
45°	936	986	1064	1123	1150	723
55°	720	782	878	954	987	643
65°	490	562	670	753	786	484
75°	252	332	435	508	529	267
85°	55	102	111	110	111	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1514.6	1514.6	1514.6	1514.6	1514.6
2.5°	1520.9	1509.9	1514.6	1514.6	1508.4
5°	1514.6	1505.2	1513.1	1513.1	1513.1
7.5°	1503.7	1495.8	1508.4	1511.5	1511.5
10°	1486.5	1483.3	1499.0	1503.7	1505.2
12.5°	1467.7	1466.1	1488.0	1494.3	1499.0
15°	1442.6	1445.8	1470.8	1481.8	1486.5
17.5°	1416.0	1422.3	1450.5	1466.1	1470.8
20°	1384.8	1394.1	1427.0	1442.6	1452.0
22.5°	1350.3	1364.4	1398.8	1417.6	1428.6
25°	1312.8	1330.0	1369.1	1392.6	1405.1
27.5°	1272.1	1294.0	1339.4	1366.0	1378.5
30°	1228.3	1253.3	1303.4	1334.7	1350.3
32.5°	1182.9	1212.6	1267.4	1301.8	1320.6
35°	1137.5	1170.4	1229.8	1270.5	1289.3
37.5°	1092.2	1125.0	1190.7	1234.5	1258.0
40°	1040.5	1079.6	1150.0	1198.6	1222.0
42.5°	990.5	1032.7	1107.8	1161.0	1186.0
45°	935.7	985.8	1064.0	1123.4	1150.0
47.5°	885.6	935.7	1020.2	1082.8	1112.5
50°	830.9	884.1	973.2	1042.1	1073.4
52.5°	777.7	832.4	926.3	999.8	1031.1
55°	719.8	782.3	877.8	954.5	987.3
57.5°	661.9	729.1	827.7	907.5	940.4
60°	605.5	674.4	777.7	857.5	891.9
62.5°	549.2	618.1	726.0	807.4	840.2
65°	489.7	561.7	669.7	752.6	785.5
67.5°	430.3	505.4	613.4	696.3	727.6
70°	367.7	447.5	555.5	636.8	668.1
72.5°	309.8	389.6	496.0	575.8	605.5
75°	251.9	331.7	435.0	508.5	528.9
77.5°	195.6	275.4	367.7	416.2	420.9
80°	142.4	217.5	292.6	306.7	305.1
82.5°	95.4	162.7	201.8	203.4	208.1
85°	54.8	101.7	111.1	109.5	111.1
87.5°	21.9	36.0	31.3	23.5	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)