

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: P388896

Luminaire Tested: **24CZ2-60-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: P388896
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: 24CZ2-60-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: 4671.2 lumens
Efficiency: N/A
Efficacy: 84.0 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

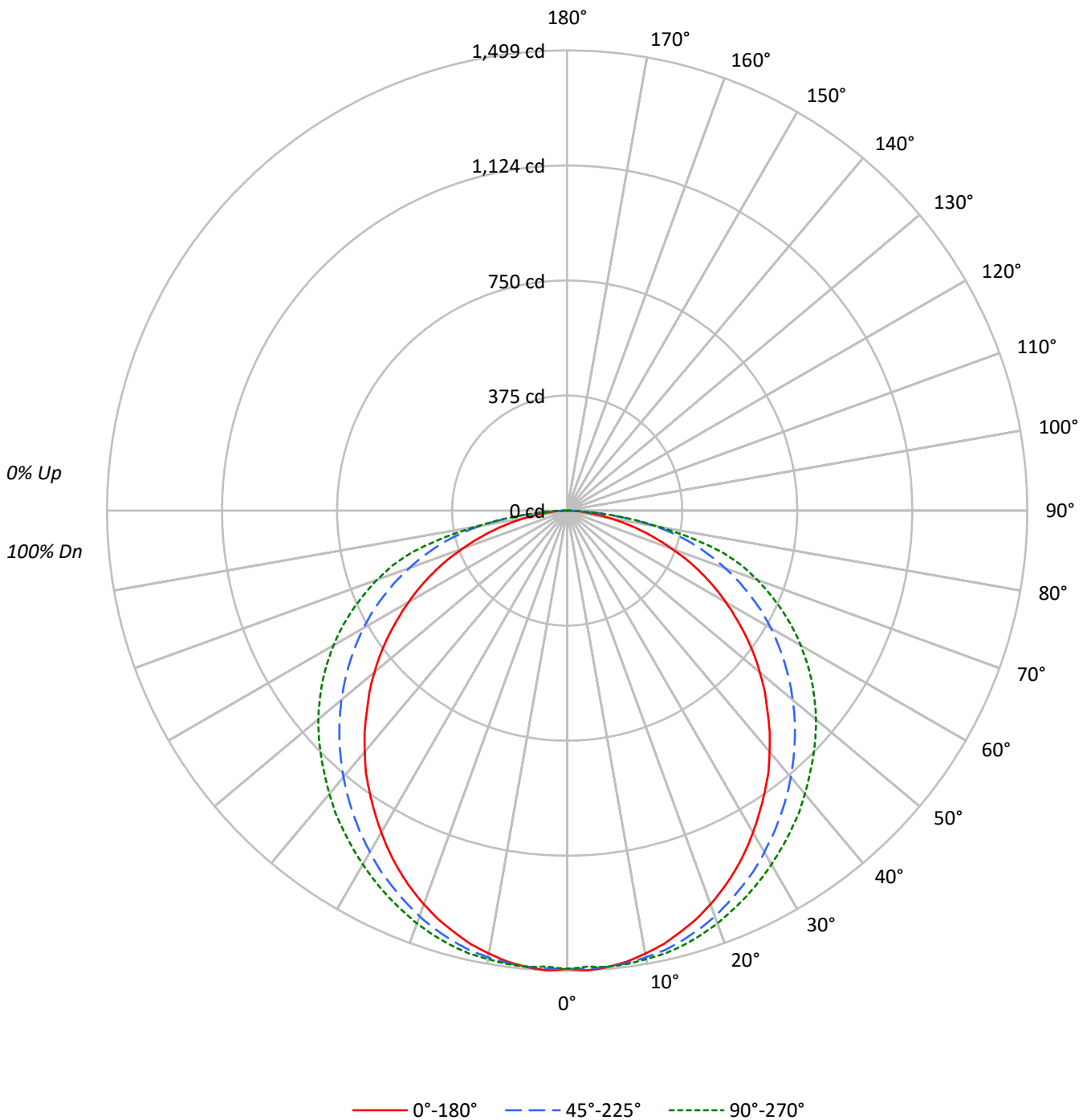
Input Watts (W): 55.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2009	2009	2009
5°	2017	2015	2015
10°	2002	2019	2027
15°	1981	2020	2041
20°	1955	2014	2050
25°	1921	2004	2056
30°	1881	1996	2068
35°	1842	1991	2088
40°	1802	1991	2116
45°	1755	1996	2157
50°	1715	2008	2215
55°	1665	2030	2283
60°	1606	2063	2366
65°	1537	2102	2465
70°	1426	2154	2591
75°	1291	2229	2711
80°	1088	2235	2331
85°	834	1690	1690



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.7	3.0
10°-20°	407.8	8.7
20°-30°	619.4	13.3
30°-40°	753.4	16.1
40°-50°	802.1	17.2
50°-60°	764.0	16.4
60°-70°	638.9	13.7
70°-80°	426.0	9.1
80°-90°	117.9	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°	1168.9	25.0
0°-40°	1922.3	41.2
0°-60°	3488.4	74.7
0°-90°	4671.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4671.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1493	1493	1493	1493	1493	
5°	1493	1484	1492	1492	1492	142
15°	1422	1425	1450	1461	1465	401
25°	1294	1311	1350	1373	1385	596
35°	1121	1154	1212	1252	1271	702
45°	922	972	1049	1108	1134	713
55°	710	771	865	941	973	634
65°	483	554	660	742	774	477
75°	248	327	429	501	521	263
85°	54	100	110	108	110	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1493.1	1493.1	1493.1	1493.1	1493.1
2.5°	1499.3	1488.5	1493.1	1493.1	1487.0
5°	1493.1	1483.9	1491.6	1491.6	1491.6
7.5°	1482.3	1474.6	1487.0	1490.1	1490.1
10°	1465.4	1462.3	1477.7	1482.3	1483.9
12.5°	1446.9	1445.3	1466.9	1473.1	1477.7
15°	1422.2	1425.3	1450.0	1460.8	1465.4
17.5°	1396.0	1402.1	1429.9	1445.3	1450.0
20°	1365.1	1374.4	1406.8	1422.2	1431.4
22.5°	1331.2	1345.1	1379.0	1397.5	1408.3
25°	1294.2	1311.1	1349.7	1372.8	1385.2
27.5°	1254.1	1275.6	1320.4	1346.6	1358.9
30°	1210.9	1235.5	1284.9	1315.8	1331.2
32.5°	1166.1	1195.4	1249.4	1283.4	1301.9
35°	1121.4	1153.8	1212.4	1252.5	1271.0
37.5°	1076.7	1109.1	1173.8	1217.0	1240.2
40°	1025.8	1064.3	1133.7	1181.6	1204.7
42.5°	976.4	1018.1	1092.1	1144.5	1169.2
45°	922.4	971.8	1048.9	1107.5	1133.7
47.5°	873.1	922.4	1005.7	1067.4	1096.7
50°	819.1	871.5	959.4	1027.3	1058.2
52.5°	766.6	820.6	913.2	985.7	1016.5
55°	709.6	771.3	865.3	940.9	973.3
57.5°	652.5	718.8	816.0	894.7	927.0
60°	596.9	664.8	766.6	845.3	879.2
62.5°	541.4	609.3	715.7	795.9	828.3
65°	482.8	553.8	660.2	741.9	774.3
67.5°	424.2	498.2	604.7	686.4	717.3
70°	362.5	441.2	547.6	627.8	658.6
72.5°	305.4	384.1	489.0	567.6	596.9
75°	248.3	327.0	428.8	501.3	521.4
77.5°	192.8	271.5	362.5	410.3	414.9
80°	140.4	214.4	288.4	302.3	300.8
82.5°	94.1	160.4	199.0	200.5	205.2
85°	54.0	100.3	109.5	108.0	109.5
87.5°	21.6	35.5	30.9	23.1	23.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)