

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: P388920

Luminaire Tested: **24CZ2-60HE-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: P388920
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: 24CZ2-60HE-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: 4647.2 lumens
Efficiency: N/A
Efficacy: 105.4 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

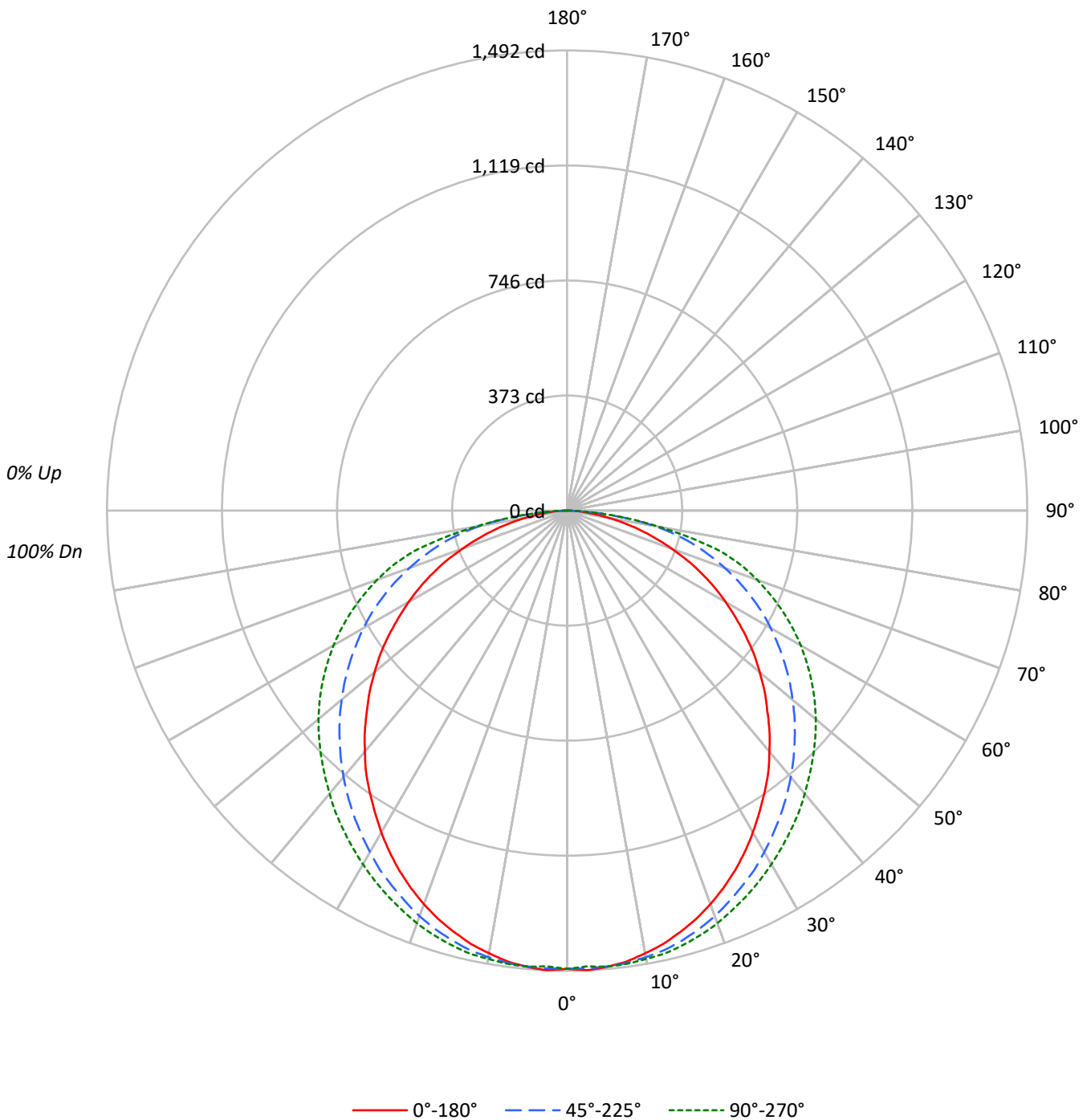
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1999	1999	1999
5°	2006	2004	2004
10°	1992	2009	2017
15°	1971	2009	2031
20°	1945	2004	2039
25°	1911	1993	2046
30°	1872	1986	2057
35°	1832	1981	2077
40°	1792	1981	2105
45°	1746	1986	2146
50°	1706	1998	2204
55°	1656	2019	2271
60°	1598	2052	2354
65°	1529	2091	2453
70°	1419	2143	2578
75°	1285	2218	2696
80°	1082	2224	2318
85°	829	1683	1683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.0	3.0
10°-20°	405.7	8.7
20°-30°	616.2	13.3
30°-40°	749.5	16.1
40°-50°	798.0	17.2
50°-60°	760.1	16.4
60°-70°	635.6	13.7
70°-80°	423.8	9.1
80°-90°	117.3	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°	1162.9	25.0
0°-40°	1912.4	41.2
0°-60°	3470.5	74.7
0°-90°	4647.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4647.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1486	1486	1486	1486	1486	
5°	1486	1476	1484	1484	1484	141
15°	1415	1418	1442	1453	1458	399
25°	1288	1304	1343	1366	1378	593
35°	1116	1148	1206	1246	1264	698
45°	918	967	1044	1102	1128	709
55°	706	767	861	936	968	631
65°	480	551	657	738	770	475
75°	247	325	427	499	519	262
85°	54	100	109	107	109	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1485.5	1485.5	1485.5	1485.5	1485.5
2.5°	1491.6	1480.9	1485.5	1485.5	1479.3
5°	1485.5	1476.3	1483.9	1483.9	1483.9
7.5°	1474.7	1467.1	1479.3	1482.4	1482.4
10°	1457.8	1454.8	1470.1	1474.7	1476.3
12.5°	1439.4	1437.9	1459.4	1465.5	1470.1
15°	1414.9	1417.9	1442.5	1453.2	1457.8
17.5°	1388.8	1394.9	1422.6	1437.9	1442.5
20°	1358.1	1367.3	1399.5	1414.9	1424.1
22.5°	1324.3	1338.2	1371.9	1390.3	1401.1
25°	1287.5	1304.4	1342.8	1365.8	1378.1
27.5°	1247.6	1269.1	1313.6	1339.7	1352.0
30°	1204.6	1229.2	1278.3	1309.0	1324.3
32.5°	1160.1	1189.3	1243.0	1276.8	1295.2
35°	1115.6	1147.9	1206.2	1246.1	1264.5
37.5°	1071.1	1103.4	1167.8	1210.8	1233.8
40°	1020.5	1058.9	1127.9	1175.5	1198.5
42.5°	971.4	1012.8	1086.5	1138.7	1163.2
45°	917.7	966.8	1043.5	1101.8	1127.9
47.5°	868.6	917.7	1000.5	1061.9	1091.1
50°	814.9	867.0	954.5	1022.0	1052.7
52.5°	762.7	816.4	908.5	980.6	1011.3
55°	705.9	767.3	860.9	936.1	968.3
57.5°	649.1	715.1	811.8	890.1	922.3
60°	593.9	661.4	762.7	840.9	874.7
62.5°	538.6	606.2	712.0	791.8	824.1
65°	480.3	550.9	656.8	738.1	770.4
67.5°	422.0	495.7	601.6	682.9	713.6
70°	360.6	438.9	544.8	624.6	655.3
72.5°	303.8	382.1	486.5	564.7	593.9
75°	247.1	325.3	426.6	498.7	518.7
77.5°	191.8	270.1	360.6	408.2	412.8
80°	139.6	213.3	287.0	300.8	299.2
82.5°	93.6	159.6	198.0	199.5	204.1
85°	53.7	99.7	109.0	107.4	109.0
87.5°	21.5	35.3	30.7	23.0	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)