

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: P388927

Luminaire Tested: **24CZ2-60HE-SQR-UNV-L940-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: P388927
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-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4870.1 lumens
Efficiency: N/A
Efficacy: 110.4 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

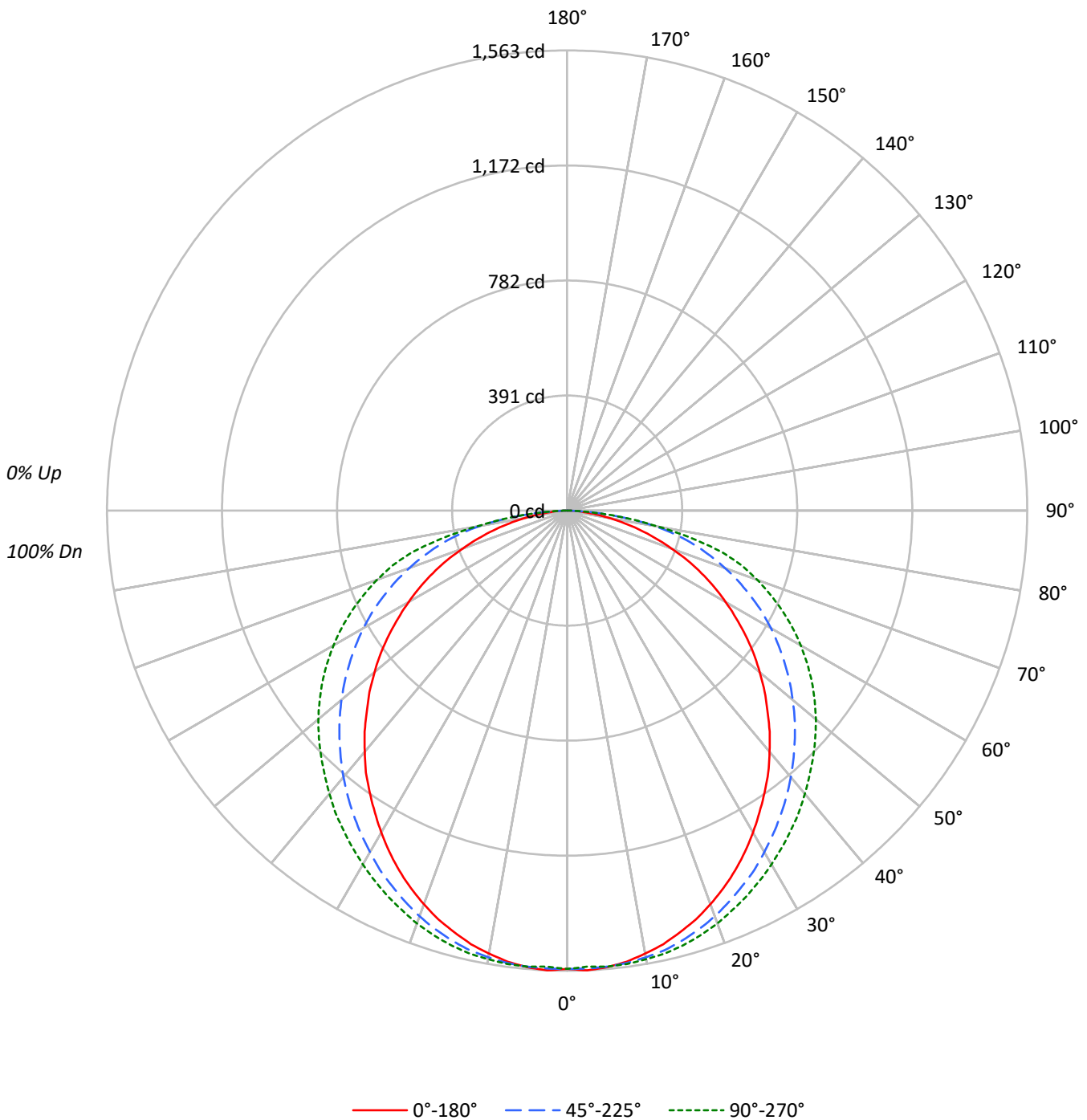
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2095	2095	2095
5°	2103	2100	2100
10°	2087	2105	2114
15°	2065	2106	2128
20°	2038	2100	2137
25°	2003	2089	2144
30°	1961	2081	2156
35°	1920	2076	2177
40°	1878	2076	2206
45°	1830	2081	2249
50°	1787	2094	2309
55°	1735	2116	2381
60°	1675	2151	2467
65°	1603	2191	2570
70°	1487	2246	2701
75°	1346	2324	2826
80°	1134	2330	2430
85°	869	1763	1763



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	3.0
10°-20°	425.1	8.7
20°-30°	645.8	13.3
30°-40°	785.5	16.1
40°-50°	836.3	17.2
50°-60°	796.5	16.4
60°-70°	666.1	13.7
70°-80°	444.1	9.1
80°-90°	122.9	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°	1218.7	25.0
0°-40°	2004.2	41.2
0°-60°	3637.0	74.7
0°-90°	4870.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4870.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1557	1557	1557	1557	1557	
5°	1557	1547	1555	1555	1555	148
15°	1483	1486	1512	1523	1528	418
25°	1349	1367	1407	1431	1444	621
35°	1169	1203	1264	1306	1325	732
45°	962	1013	1094	1155	1182	743
55°	740	804	902	981	1015	661
65°	503	577	688	774	807	497
75°	259	341	447	523	544	274
85°	56	104	114	113	114	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1556.7	1556.7	1556.7	1556.7	1556.7
2.5°	1563.2	1551.9	1556.7	1556.7	1550.3
5°	1556.7	1547.1	1555.1	1555.1	1555.1
7.5°	1545.5	1537.4	1550.3	1553.5	1553.5
10°	1527.8	1524.6	1540.6	1545.5	1547.1
12.5°	1508.5	1506.9	1529.4	1535.8	1540.6
15°	1482.7	1486.0	1511.7	1522.9	1527.8
17.5°	1455.4	1461.8	1490.8	1506.9	1511.7
20°	1423.2	1432.9	1466.7	1482.7	1492.4
22.5°	1387.9	1402.3	1437.7	1457.0	1468.3
25°	1349.3	1367.0	1407.2	1431.3	1444.1
27.5°	1307.5	1330.0	1376.6	1403.9	1416.8
30°	1262.4	1288.2	1339.6	1371.8	1387.9
32.5°	1215.8	1246.3	1302.6	1338.0	1357.3
35°	1169.1	1202.9	1264.0	1305.8	1325.1
37.5°	1122.5	1156.3	1223.8	1268.9	1293.0
40°	1069.4	1109.6	1182.0	1231.9	1256.0
42.5°	1018.0	1061.4	1138.6	1193.3	1219.0
45°	961.7	1013.2	1093.6	1154.7	1182.0
47.5°	910.2	961.7	1048.5	1112.9	1143.4
50°	853.9	908.6	1000.3	1071.0	1103.2
52.5°	799.3	855.6	952.0	1027.6	1059.8
55°	739.8	804.1	902.2	981.0	1014.8
57.5°	680.3	749.4	850.7	932.7	966.5
60°	622.4	693.1	799.3	881.3	916.7
62.5°	564.5	635.2	746.2	829.8	863.6
65°	503.4	577.3	688.3	773.5	807.3
67.5°	442.3	519.4	630.4	715.6	747.8
70°	377.9	459.9	570.9	654.5	686.7
72.5°	318.4	400.4	509.8	591.8	622.4
75°	258.9	340.9	447.1	522.7	543.6
77.5°	201.0	283.0	377.9	427.8	432.6
80°	146.3	223.5	300.7	315.2	313.6
82.5°	98.1	167.3	207.5	209.1	213.9
85°	56.3	104.5	114.2	112.6	114.2
87.5°	22.5	37.0	32.2	24.1	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)