

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: P388952

Luminaire Tested: **24CZ2-60VHE-SQR-UNV-L940-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: P388952
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-L940-CD1-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: 4967.4 lumens
Efficiency: N/A
Efficacy: 128.4 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

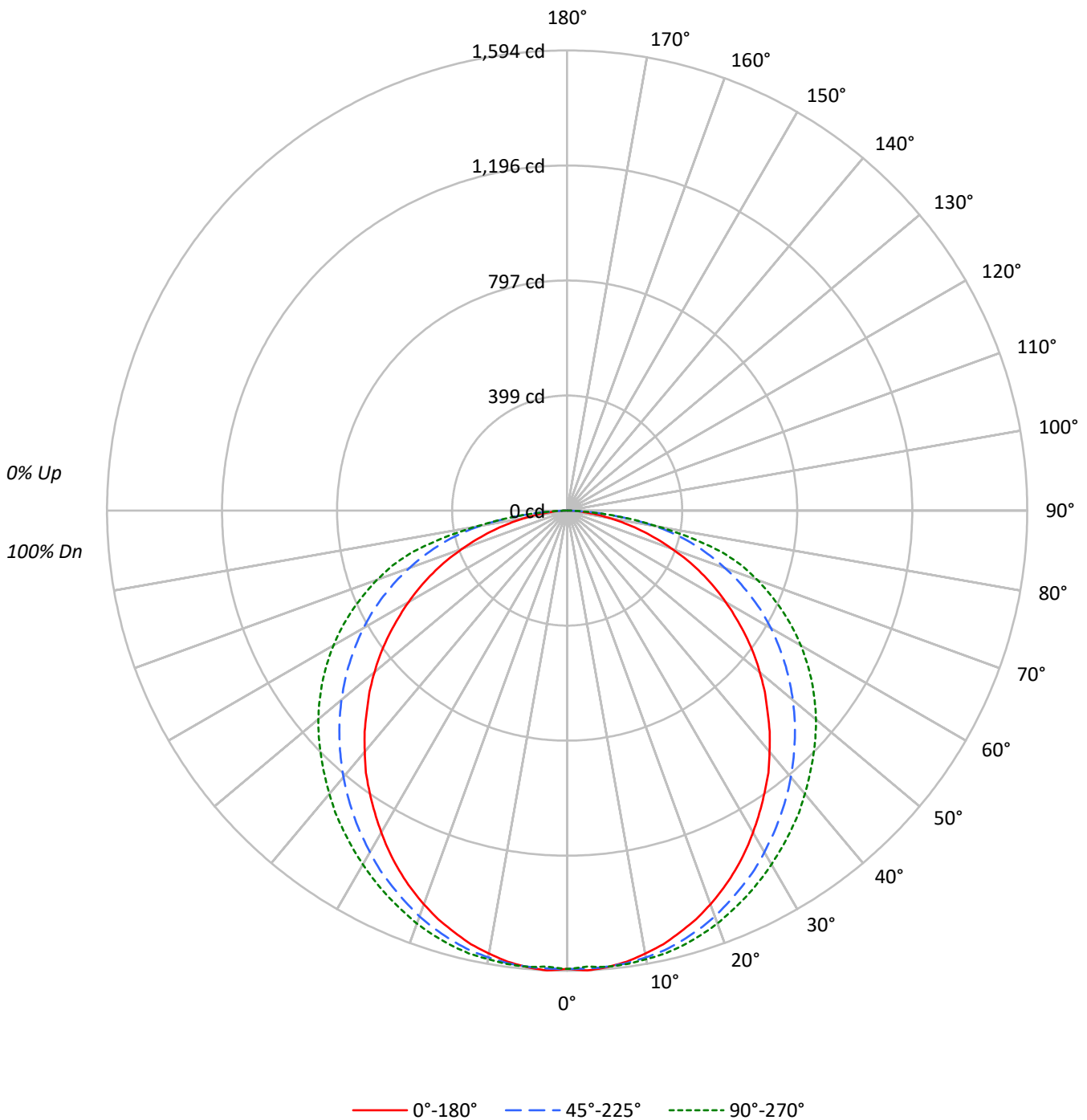
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2136	2136	2136
5°	2145	2142	2142
10°	2129	2147	2156
15°	2107	2148	2171
20°	2079	2142	2180
25°	2043	2131	2187
30°	2000	2123	2199
35°	1959	2118	2220
40°	1916	2118	2250
45°	1866	2122	2294
50°	1823	2136	2355
55°	1770	2159	2428
60°	1708	2194	2516
65°	1635	2235	2621
70°	1517	2291	2755
75°	1373	2371	2882
80°	1157	2376	2479
85°	886	1798	1798



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	3.0
10°-20°	433.6	8.7
20°-30°	658.7	13.3
30°-40°	801.2	16.1
40°-50°	853.0	17.2
50°-60°	812.4	16.4
60°-70°	679.4	13.7
70°-80°	453.0	9.1
80°-90°	125.3	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°	1243.0	25.0
0°-40°	2044.2	41.2
0°-60°	3709.6	74.7
0°-90°	4967.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4967.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1588	1588	1588	1588	1588	
5°	1588	1578	1586	1586	1586	151
15°	1512	1516	1542	1553	1558	427
25°	1376	1394	1435	1460	1473	634
35°	1192	1227	1289	1332	1352	746
45°	981	1033	1115	1178	1206	758
55°	754	820	920	1001	1035	675
65°	513	589	702	789	823	507
75°	264	348	456	533	554	280
85°	57	107	116	115	116	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1587.8	1587.8	1587.8	1587.8	1587.8
2.5°	1594.4	1582.9	1587.8	1587.8	1581.3
5°	1587.8	1578.0	1586.2	1586.2	1586.2
7.5°	1576.3	1568.1	1581.3	1584.5	1584.5
10°	1558.3	1555.0	1571.4	1576.3	1578.0
12.5°	1538.6	1537.0	1559.9	1566.5	1571.4
15°	1512.4	1515.6	1541.9	1553.4	1558.3
17.5°	1484.5	1491.0	1520.6	1537.0	1541.9
20°	1451.7	1461.5	1496.0	1512.4	1522.2
22.5°	1415.6	1430.4	1466.4	1486.1	1497.6
25°	1376.2	1394.3	1435.3	1459.9	1473.0
27.5°	1333.6	1356.5	1404.1	1432.0	1445.1
30°	1287.6	1313.9	1366.4	1399.2	1415.6
32.5°	1240.1	1271.2	1328.7	1364.7	1384.4
35°	1192.5	1227.0	1289.3	1331.9	1351.6
37.5°	1144.9	1179.4	1248.3	1294.2	1318.8
40°	1090.8	1131.8	1205.6	1256.5	1281.1
42.5°	1038.3	1082.6	1161.3	1217.1	1243.4
45°	980.9	1033.4	1115.4	1177.7	1205.6
47.5°	928.4	980.9	1069.5	1135.1	1166.3
50°	871.0	926.8	1020.3	1092.4	1125.3
52.5°	815.2	872.6	971.1	1048.2	1081.0
55°	754.5	820.2	920.2	1000.6	1035.0
57.5°	693.9	764.4	867.7	951.4	985.8
60°	634.8	707.0	815.2	898.9	935.0
62.5°	575.7	647.9	761.1	846.4	880.8
65°	513.4	588.9	702.1	789.0	823.4
67.5°	451.1	529.8	643.0	729.9	762.7
70°	385.5	469.1	582.3	667.6	700.4
72.5°	324.8	408.4	520.0	603.6	634.8
75°	264.1	347.7	456.0	533.1	554.4
77.5°	205.0	288.7	385.5	436.3	441.2
80°	149.3	228.0	306.7	321.5	319.9
82.5°	100.1	170.6	211.6	213.2	218.2
85°	57.4	106.6	116.5	114.8	116.5
87.5°	23.0	37.7	32.8	24.6	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)