

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: P388950

Luminaire Tested: **24CZ2-60VHE-SQR-UNV-L940-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: P388950
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-SDWPD1-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: 4846.6 lumens
Efficiency: N/A
Efficacy: 125.2 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

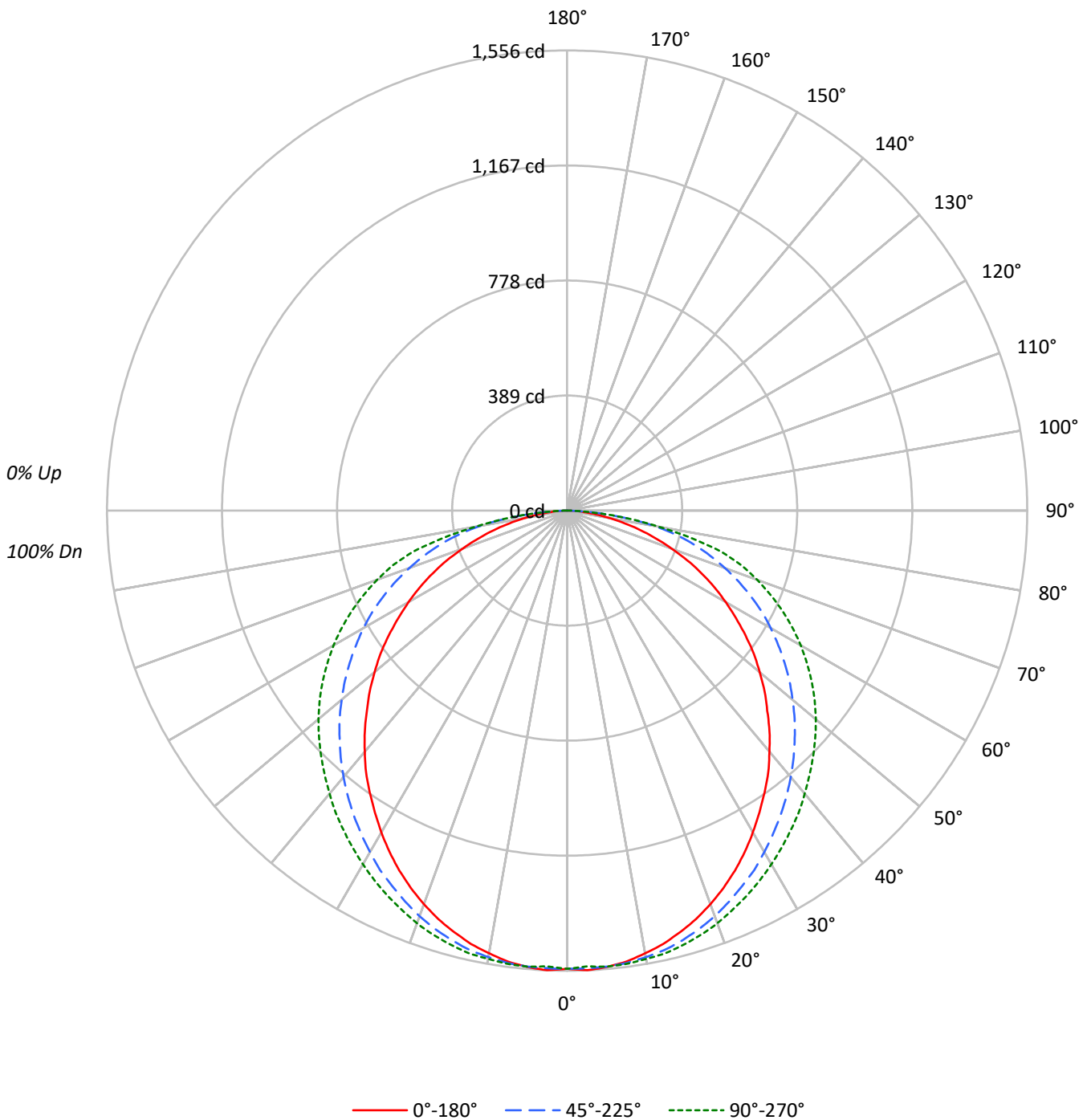
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2084	2084	2084
5°	2092	2090	2090
10°	2077	2095	2103
15°	2055	2096	2118
20°	2028	2090	2127
25°	1993	2079	2134
30°	1952	2071	2146
35°	1911	2066	2166
40°	1869	2066	2195
45°	1821	2071	2238
50°	1779	2084	2298
55°	1727	2106	2369
60°	1667	2140	2455
65°	1595	2181	2558
70°	1480	2235	2688
75°	1340	2313	2812
80°	1128	2319	2418
85°	865	1754	1754



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.1	3.0
10°-20°	423.1	8.7
20°-30°	642.7	13.3
30°-40°	781.7	16.1
40°-50°	832.3	17.2
50°-60°	792.7	16.4
60°-70°	662.9	13.7
70°-80°	442.0	9.1
80°-90°	122.3	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°	1212.8	25.0
0°-40°	1994.5	41.2
0°-60°	3619.4	74.7
0°-90°	4846.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4846.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1549	1549	1549	1549	1549	
5°	1549	1540	1548	1548	1548	147
15°	1476	1479	1504	1516	1520	416
25°	1343	1360	1400	1424	1437	618
35°	1164	1197	1258	1300	1319	728
45°	957	1008	1088	1149	1176	740
55°	736	800	898	976	1010	658
65°	501	575	685	770	803	495
75°	258	339	445	520	541	273
85°	56	104	114	112	114	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1549.2	1549.2	1549.2	1549.2	1549.2
2.5°	1555.6	1544.4	1549.2	1549.2	1542.8
5°	1549.2	1539.6	1547.6	1547.6	1547.6
7.5°	1538.0	1530.0	1542.8	1546.0	1546.0
10°	1520.4	1517.2	1533.2	1538.0	1539.6
12.5°	1501.2	1499.6	1522.0	1528.4	1533.2
15°	1475.6	1478.8	1504.4	1515.6	1520.4
17.5°	1448.4	1454.8	1483.6	1499.6	1504.4
20°	1416.4	1426.0	1459.6	1475.6	1485.2
22.5°	1381.2	1395.6	1430.8	1450.0	1461.2
25°	1342.8	1360.4	1400.4	1424.4	1437.2
27.5°	1301.1	1323.5	1370.0	1397.2	1410.0
30°	1256.3	1281.9	1333.2	1365.2	1381.2
32.5°	1209.9	1240.3	1296.3	1331.6	1350.8
35°	1163.5	1197.1	1257.9	1299.5	1318.7
37.5°	1117.1	1150.7	1217.9	1262.7	1286.7
40°	1064.3	1104.3	1176.3	1225.9	1249.9
42.5°	1013.1	1056.3	1133.1	1187.5	1213.1
45°	957.1	1008.3	1088.3	1149.1	1176.3
47.5°	905.8	957.1	1043.5	1107.5	1137.9
50°	849.8	904.2	995.5	1065.9	1097.9
52.5°	795.4	851.4	947.5	1022.7	1054.7
55°	736.2	800.2	897.8	976.3	1009.9
57.5°	677.0	745.8	846.6	928.2	961.9
60°	619.4	689.8	795.4	877.0	912.2
62.5°	561.7	632.2	742.6	825.8	859.4
65°	500.9	574.6	685.0	769.8	803.4
67.5°	440.1	516.9	627.4	712.2	744.2
70°	376.1	457.7	568.2	651.4	683.4
72.5°	316.9	398.5	507.3	589.0	619.4
75°	257.7	339.3	444.9	520.1	540.9
77.5°	200.1	281.7	376.1	425.7	430.5
80°	145.6	222.5	299.3	313.7	312.1
82.5°	97.6	166.4	206.5	208.1	212.9
85°	56.0	104.0	113.6	112.0	113.6
87.5°	22.4	36.8	32.0	24.0	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)