

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: P388901

Luminaire Tested: **24CZ2-60VHE-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: P388901
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

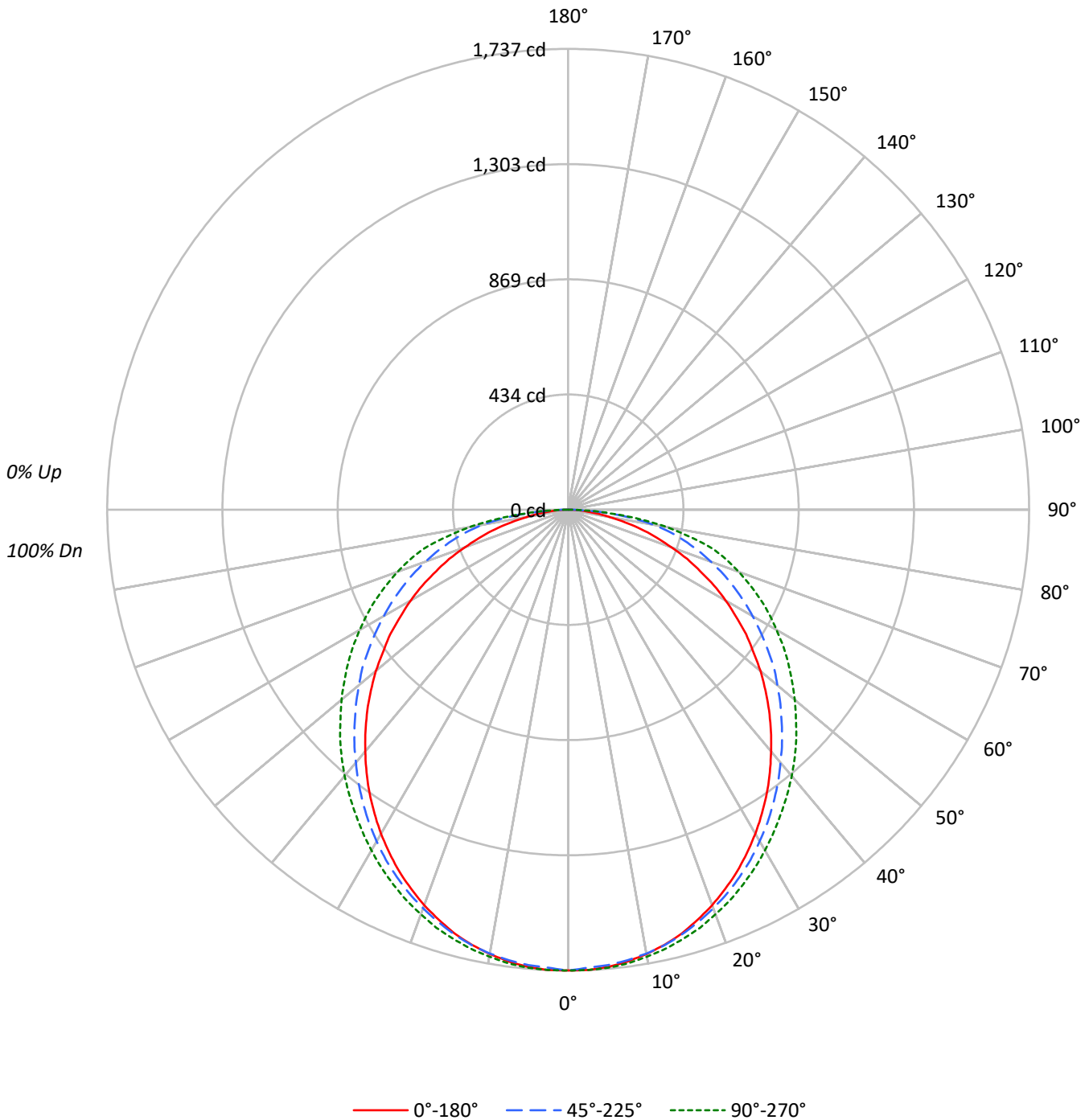
Lumens per Lamp: N/A
Luminaire Lumens: 5172.3 lumens
Efficiency: N/A
Efficacy: 133.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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



TEST NUMBER: P388901
CATALOG NUMBER: 24CZ2-60VHE-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388901

CATALOG NUMBER: 24CZ2-60VHE-UNV-L940-CD1-U

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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2337	2337	2337
5°	2336	2327	2341
10°	2323	2321	2337
15°	2304	2308	2332
20°	2271	2289	2323
25°	2235	2268	2314
30°	2191	2242	2304
35°	2144	2214	2297
40°	2089	2186	2301
45°	2037	2165	2312
50°	1980	2153	2334
55°	1919	2150	2377
60°	1844	2160	2439
65°	1748	2193	2544
70°	1623	2248	2689
75°	1481	2360	2916
80°	1217	2541	2916
85°	932	2345	2506



TEST NUMBER: P388901

CATALOG NUMBER: 24CZ2-60VHE-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.2	3.2
10°-20°	468.9	9.1
20°-30°	705.6	13.6
30°-40°	845.6	16.3
40°-50°	881.2	17.0
50°-60°	819.8	15.9
60°-70°	675.2	13.1
70°-80°	459.9	8.9
80°-90°	151.8	2.9
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°	1338.7	25.9
0°-40°	2184.3	42.2
0°-60°	3885.3	75.1
0°-90°	5172.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5172.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1737	1737	1737	1737	1737	
5°	1730	1730	1723	1731	1733	164
15°	1654	1655	1657	1673	1674	466
25°	1505	1512	1528	1554	1559	693
35°	1305	1321	1348	1384	1398	816
45°	1070	1093	1138	1194	1215	825
55°	818	846	917	989	1013	729
65°	549	596	689	770	799	545
75°	285	349	454	535	561	300
85°	60	117	152	162	162	75
90°	0	0	0	0	0	



TEST NUMBER: P388901

CATALOG NUMBER: 24CZ2-60VHE-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1736.6	1736.6	1736.6	1736.6	1736.6
2.5°	1736.6	1736.6	1728.0	1736.6	1736.6
5°	1729.7	1729.7	1722.8	1731.4	1733.1
7.5°	1717.6	1719.3	1712.4	1722.8	1724.5
10°	1700.3	1702.1	1698.6	1709.0	1710.7
12.5°	1679.6	1681.3	1681.3	1693.4	1695.2
15°	1653.7	1655.4	1657.2	1672.7	1674.4
17.5°	1620.9	1626.1	1629.6	1648.5	1652.0
20°	1586.4	1591.6	1598.5	1619.2	1622.7
22.5°	1546.7	1553.6	1565.7	1588.1	1593.3
25°	1505.3	1512.2	1527.7	1553.6	1558.8
27.5°	1458.7	1469.0	1488.0	1515.6	1522.5
30°	1410.3	1420.7	1443.1	1472.5	1482.8
32.5°	1358.5	1372.3	1398.2	1431.0	1441.4
35°	1305.0	1320.6	1348.2	1384.4	1398.2
37.5°	1248.1	1265.3	1298.1	1337.8	1355.1
40°	1189.4	1210.1	1244.6	1291.2	1310.2
42.5°	1130.7	1149.7	1192.8	1242.9	1263.6
45°	1070.3	1092.7	1137.6	1194.5	1215.3
47.5°	1008.1	1030.6	1084.1	1144.5	1163.5
50°	946.0	968.4	1028.8	1092.7	1115.1
52.5°	878.6	908.0	977.0	1040.9	1063.4
55°	818.2	845.8	916.6	989.1	1013.3
57.5°	749.2	782.0	859.7	935.6	961.5
60°	685.3	719.8	802.7	880.4	906.3
62.5°	619.7	657.7	745.7	825.1	854.5
65°	548.9	595.5	688.8	769.9	799.2
67.5°	485.1	533.4	631.8	714.7	740.6
70°	412.6	471.3	571.4	654.2	683.6
72.5°	350.4	409.1	514.4	595.5	624.9
75°	284.8	348.7	454.0	535.1	561.0
77.5°	219.2	290.0	395.3	457.4	466.1
80°	157.1	231.3	328.0	364.2	376.3
82.5°	110.5	177.8	241.7	265.8	272.7
85°	60.4	117.4	151.9	162.3	162.3
87.5°	25.9	50.1	60.4	62.1	63.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)