

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: P388898

Luminaire Tested: **24CZ2-60VHE-UNV-L935-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: P388898
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-L935-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

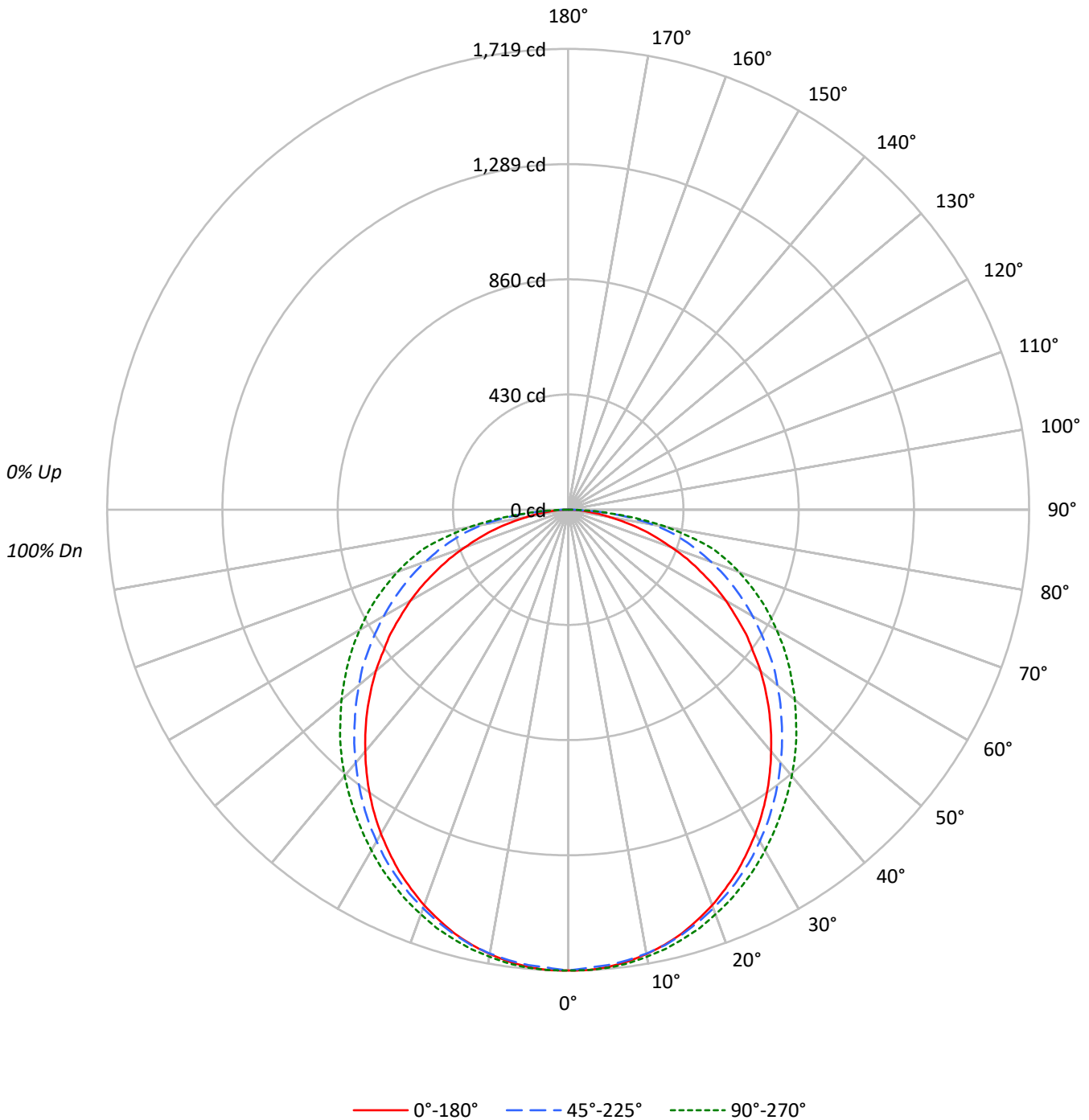
Lumens per Lamp: N/A
Luminaire Lumens: 5119.4 lumens
Efficiency: N/A
Efficacy: 132.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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



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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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2313	2313	2313
5°	2312	2303	2317
10°	2299	2297	2313
15°	2280	2285	2309
20°	2248	2265	2300
25°	2212	2245	2290
30°	2169	2219	2280
35°	2122	2192	2273
40°	2068	2164	2278
45°	2016	2142	2289
50°	1960	2132	2310
55°	1900	2128	2353
60°	1825	2138	2414
65°	1730	2170	2519
70°	1606	2225	2662
75°	1465	2336	2887
80°	1205	2515	2886
85°	923	2322	2479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.6	3.2
10°-20°	464.1	9.1
20°-30°	698.4	13.6
30°-40°	836.9	16.3
40°-50°	872.2	17.0
50°-60°	811.5	15.9
60°-70°	668.3	13.1
70°-80°	455.2	8.9
80°-90°	150.3	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°	1325.0	25.9
0°-40°	2162.0	42.2
0°-60°	3845.6	75.1
0°-90°	5119.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5119.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1719	1719	1719	1719	1719	
5°	1712	1712	1705	1714	1715	162
15°	1637	1638	1640	1656	1657	461
25°	1490	1497	1512	1538	1543	686
35°	1292	1307	1334	1370	1384	807
45°	1059	1082	1126	1182	1203	817
55°	810	837	907	979	1003	722
65°	543	590	682	762	791	539
75°	282	345	449	530	555	297
85°	60	116	150	161	161	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1718.8	1718.8	1718.8	1718.8	1718.8
2.5°	1718.8	1718.8	1710.3	1718.8	1718.8
5°	1712.0	1712.0	1705.2	1713.7	1715.4
7.5°	1700.0	1701.7	1694.9	1705.2	1706.9
10°	1682.9	1684.6	1681.2	1691.5	1693.2
12.5°	1662.4	1664.1	1664.1	1676.1	1677.8
15°	1636.8	1638.5	1640.2	1655.6	1657.3
17.5°	1604.3	1609.5	1612.9	1631.7	1635.1
20°	1570.2	1575.3	1582.1	1602.6	1606.1
22.5°	1530.9	1537.7	1549.7	1571.9	1577.0
25°	1489.9	1496.7	1512.1	1537.7	1542.8
27.5°	1443.7	1454.0	1472.8	1500.1	1507.0
30°	1395.9	1406.2	1428.4	1457.4	1467.7
32.5°	1344.6	1358.3	1383.9	1416.4	1426.7
35°	1291.7	1307.1	1334.4	1370.3	1383.9
37.5°	1235.3	1252.4	1284.8	1324.1	1341.2
40°	1177.2	1197.7	1231.9	1278.0	1296.8
42.5°	1119.1	1137.9	1180.6	1230.2	1250.7
45°	1059.3	1081.5	1125.9	1182.3	1202.8
47.5°	997.8	1020.0	1073.0	1132.8	1151.6
50°	936.3	958.5	1018.3	1081.5	1103.7
52.5°	869.7	898.7	967.1	1030.3	1052.5
55°	809.9	837.2	907.3	979.0	1002.9
57.5°	741.5	774.0	850.9	926.0	951.7
60°	678.3	712.5	794.5	871.4	897.0
62.5°	613.4	651.0	738.1	816.7	845.7
65°	543.3	589.5	681.7	762.0	791.1
67.5°	480.1	527.9	625.3	707.3	733.0
70°	408.3	466.4	565.5	647.5	676.6
72.5°	346.8	404.9	509.2	589.5	618.5
75°	281.9	345.1	449.4	529.7	555.3
77.5°	217.0	287.0	391.3	452.8	461.3
80°	155.5	228.9	324.6	360.5	372.5
82.5°	109.3	176.0	239.2	263.1	270.0
85°	59.8	116.2	150.4	160.6	160.6
87.5°	25.6	49.5	59.8	61.5	63.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)