

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: P389741

Luminaire Tested: **24CZ2-40VHE-S-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: P389741
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40VHE-S-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3628.0 lumens
Efficiency: N/A
Efficacy: 138.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

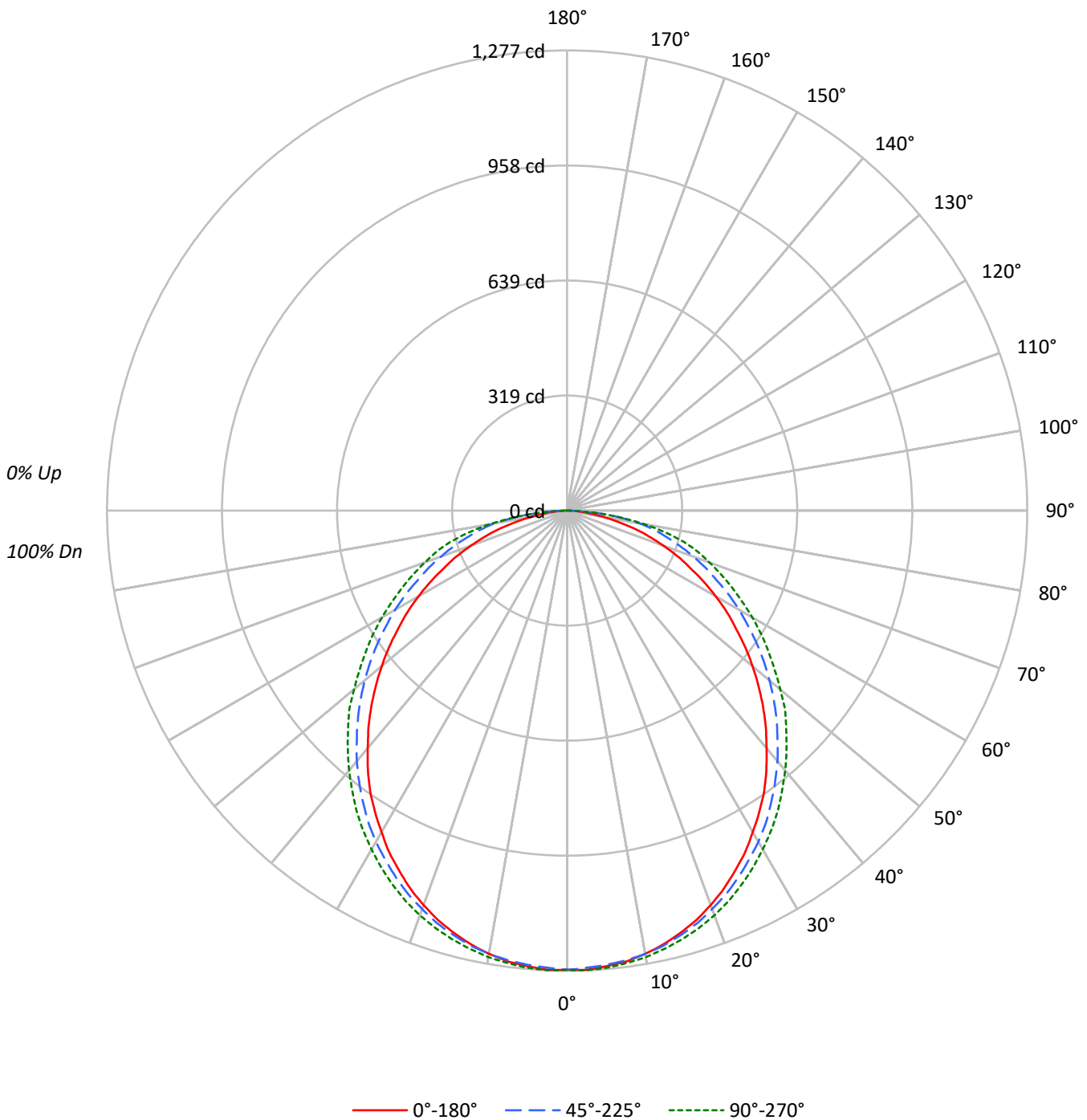
Input Watts (W): 26.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1715	1715	1715
5°	1714	1709	1720
10°	1707	1707	1719
15°	1690	1698	1716
20°	1668	1685	1711
25°	1637	1668	1701
30°	1601	1649	1686
35°	1565	1622	1673
40°	1512	1595	1654
45°	1462	1564	1636
50°	1406	1534	1616
55°	1343	1506	1600
60°	1281	1482	1597
65°	1200	1457	1607
70°	1111	1464	1650
75°	994	1491	1743
80°	804	1581	1705
85°	605	1388	1352



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.7	3.3
10°-20°	344.8	9.5
20°-30°	518.3	14.3
30°-40°	617.3	17.0
40°-50°	631.8	17.4
50°-60°	568.8	15.7
60°-70°	446.7	12.3
70°-80°	289.9	8.0
80°-90°	89.7	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°	983.7	27.1
0°-40°	1601.1	44.1
0°-60°	2801.7	77.2
0°-90°	3628.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3628.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1274	1274	1274	1274	1274	
5°	1269	1271	1265	1272	1273	121
15°	1214	1217	1219	1230	1232	342
25°	1103	1112	1124	1142	1146	508
35°	953	964	988	1012	1019	595
45°	769	787	822	853	860	593
55°	573	598	642	675	682	513
65°	377	406	458	496	505	375
75°	191	228	287	326	335	202
85°	39	73	90	88	88	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1274.5	1274.5	1274.5	1274.5	1274.5
2.5°	1275.7	1275.7	1269.9	1275.7	1276.8
5°	1268.8	1271.1	1265.3	1272.2	1273.4
7.5°	1261.9	1261.9	1258.4	1265.3	1266.5
10°	1249.2	1250.3	1249.2	1257.3	1258.4
12.5°	1233.1	1235.4	1236.5	1244.6	1245.7
15°	1213.5	1216.9	1219.2	1229.6	1231.9
17.5°	1191.6	1195.0	1200.8	1212.3	1214.6
20°	1165.1	1169.7	1176.6	1191.6	1195.0
22.5°	1136.3	1140.9	1152.4	1166.2	1172.0
25°	1102.8	1112.1	1123.6	1142.0	1145.5
27.5°	1069.4	1077.5	1092.5	1112.1	1116.7
30°	1030.2	1042.9	1061.3	1080.9	1085.5
32.5°	992.2	1004.9	1026.8	1047.5	1053.3
35°	953.0	964.5	987.6	1011.8	1018.7
37.5°	908.1	923.1	948.4	972.6	979.5
40°	860.8	879.3	908.1	933.4	941.5
42.5°	815.9	835.5	864.3	891.9	901.2
45°	768.6	787.1	821.7	852.8	859.7
47.5°	720.2	741.0	777.9	809.0	820.5
50°	671.8	693.7	732.9	765.2	772.1
52.5°	623.4	646.5	688.0	722.5	726.0
55°	572.7	598.1	641.9	675.3	682.2
57.5°	526.6	548.5	595.8	630.4	638.4
60°	475.9	500.1	550.8	583.1	593.5
62.5°	427.5	452.9	505.9	538.2	547.4
65°	376.8	405.6	457.5	495.5	504.7
67.5°	333.0	360.7	416.0	452.9	462.1
70°	282.3	313.4	372.2	410.2	419.5
72.5°	238.5	270.8	329.6	366.5	380.3
75°	191.3	228.2	286.9	326.1	335.3
77.5°	145.2	187.8	247.8	277.7	277.7
80°	103.7	148.7	204.0	217.8	220.1
82.5°	68.0	111.8	151.0	149.8	149.8
85°	39.2	72.6	89.9	87.6	87.6
87.5°	15.0	30.0	32.3	32.3	31.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)