

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: P391541

Luminaire Tested: **24CZ2-60VHE-RDP-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: P391541
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-RDP-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3478.7 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

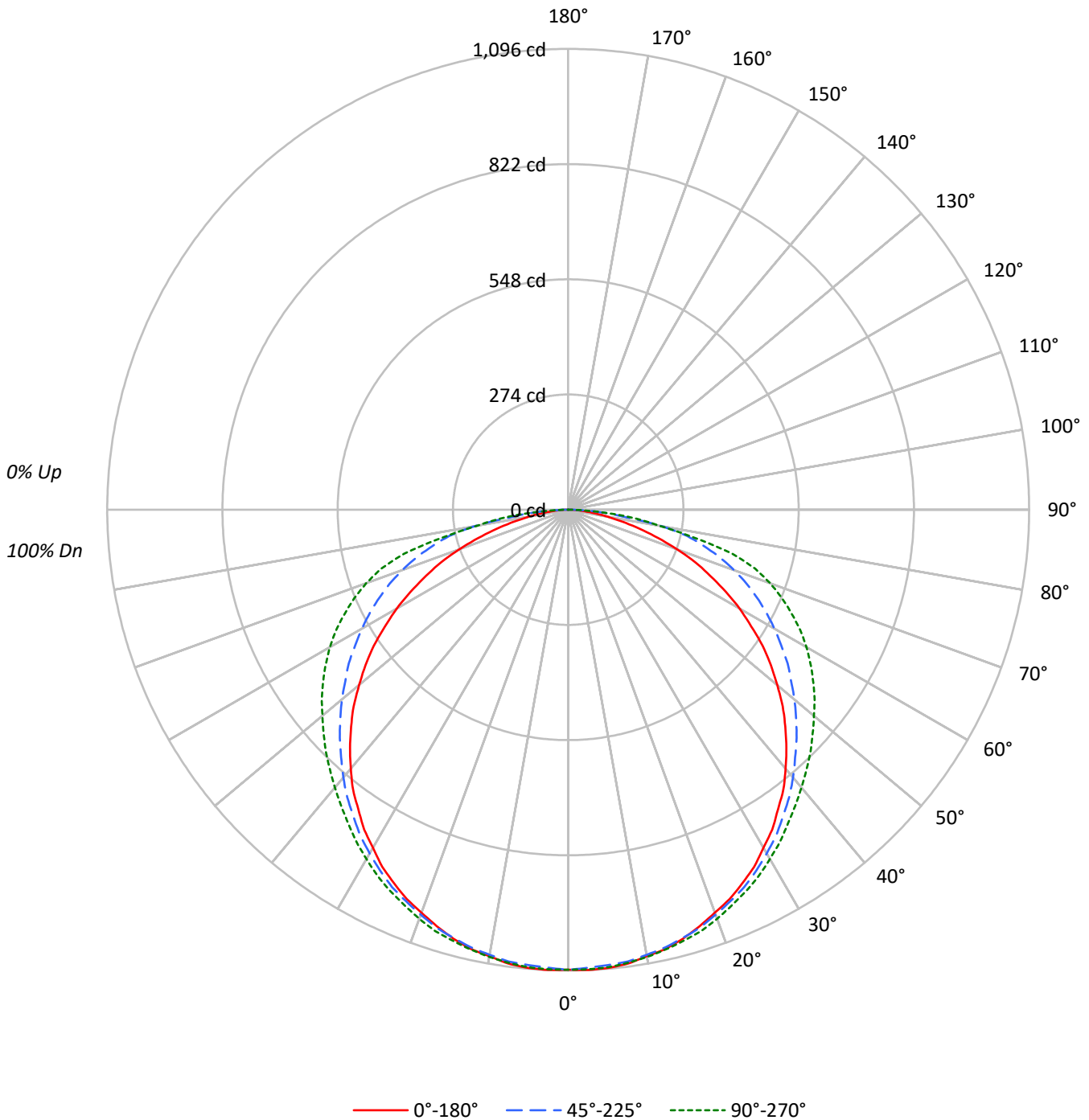
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1472	1472	1472
5°	1478	1468	1475
10°	1473	1469	1476
15°	1471	1469	1478
20°	1460	1467	1482
25°	1455	1470	1486
30°	1442	1466	1491
35°	1428	1462	1497
40°	1412	1461	1515
45°	1389	1461	1550
50°	1358	1470	1596
55°	1323	1494	1668
60°	1268	1523	1760
65°	1187	1577	1868
70°	1079	1650	2009
75°	915	1740	2099
80°	722	1751	1698
85°	533	1332	1491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.8	3.0
10°-20°	298.7	8.6
20°-30°	456.7	13.1
30°-40°	558.3	16.0
40°-50°	595.0	17.1
50°-60°	568.9	16.4
60°-70°	482.0	13.9
70°-80°	323.9	9.3
80°-90°	91.4	2.6
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°	859.1	24.7
0°-40°	1417.4	40.7
0°-60°	2581.4	74.2
0°-90°	3478.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3478.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1094	1094	1094	1094	1094	
5°	1094	1092	1087	1092	1092	104
15°	1056	1056	1054	1063	1061	298
25°	980	984	990	999	1001	452
35°	870	876	890	908	911	545
45°	730	742	768	801	814	563
55°	564	585	637	687	711	503
65°	373	411	495	561	587	370
75°	176	240	335	392	404	188
85°	34	71	86	93	97	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1094.0	1094.0	1094.0	1094.0	1094.0
2.5°	1095.7	1095.7	1090.5	1094.0	1094.0
5°	1094.0	1092.2	1087.0	1092.2	1092.2
7.5°	1088.8	1087.0	1083.6	1088.8	1087.0
10°	1078.4	1078.4	1075.0	1080.1	1080.1
12.5°	1069.8	1068.1	1066.3	1073.2	1071.5
15°	1056.0	1056.0	1054.3	1062.9	1061.2
17.5°	1038.7	1040.5	1042.2	1049.1	1050.8
20°	1019.8	1023.2	1024.9	1035.3	1035.3
22.5°	1002.5	1004.2	1007.7	1018.0	1018.0
25°	980.1	983.5	990.4	999.1	1000.8
27.5°	957.6	959.4	968.0	980.1	981.8
30°	928.3	933.5	943.8	957.6	959.4
32.5°	902.4	907.6	919.7	933.5	936.9
35°	869.6	876.5	890.3	907.6	911.1
37.5°	840.3	845.5	862.7	881.7	886.9
40°	804.1	814.4	831.7	854.1	862.7
42.5°	767.8	778.2	798.9	828.2	838.6
45°	729.9	742.0	767.8	800.6	814.4
47.5°	691.9	705.7	735.1	773.0	788.5
50°	648.8	666.0	702.3	745.4	762.7
52.5°	607.4	628.1	667.8	716.1	738.5
55°	564.2	584.9	636.7	686.7	710.9
57.5°	515.9	543.5	600.5	657.4	683.3
60°	471.1	496.9	566.0	628.1	654.0
62.5°	422.7	457.3	531.4	597.0	622.9
65°	372.7	410.7	495.2	560.8	586.7
67.5°	327.8	369.3	459.0	524.5	550.4
70°	274.4	326.1	419.3	484.9	510.7
72.5°	224.3	281.3	377.9	441.7	465.9
75°	176.0	239.8	334.7	391.7	403.8
77.5°	131.1	198.4	289.9	314.0	305.4
80°	93.2	158.7	226.0	214.0	219.1
82.5°	60.4	120.8	139.8	158.7	163.9
85°	34.5	70.7	86.3	93.2	96.6
87.5°	15.5	25.9	34.5	34.5	32.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)