

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: P391515

Luminaire Tested: **24CZ2-60VHE-HRP-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: P391515
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-HRP-UNV-L940-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4283.7 lumens
Efficiency: N/A
Efficacy: 110.7 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

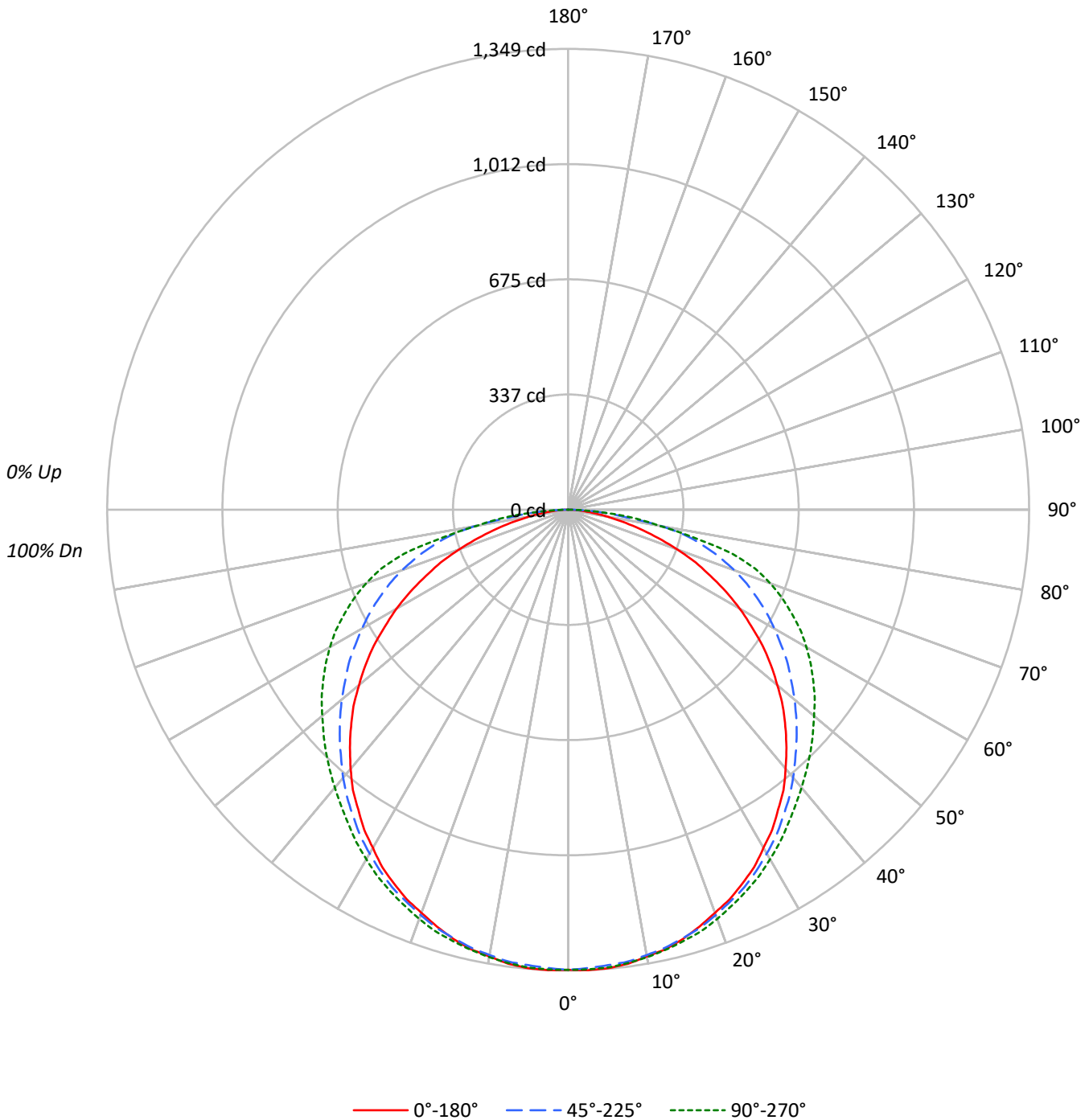
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	1813	1813	1813
5°	1819	1808	1817
10°	1814	1808	1817
15°	1811	1808	1820
20°	1798	1807	1825
25°	1792	1811	1830
30°	1776	1806	1835
35°	1759	1801	1843
40°	1739	1799	1866
45°	1710	1799	1908
50°	1672	1810	1966
55°	1630	1839	2054
60°	1561	1875	2167
65°	1461	1941	2300
70°	1329	2031	2474
75°	1127	2143	2585
80°	889	2156	2091
85°	656	1639	1837



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.8	3.0
10°-20°	367.8	8.6
20°-30°	562.4	13.1
30°-40°	687.5	16.0
40°-50°	732.7	17.1
50°-60°	700.6	16.4
60°-70°	593.5	13.9
70°-80°	398.9	9.3
80°-90°	112.5	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°	1057.9	24.7
0°-40°	1745.5	40.7
0°-60°	3178.8	74.2
0°-90°	4283.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4283.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1347	1347	1347	1347	1347	
5°	1347	1345	1339	1345	1345	128
15°	1300	1300	1298	1309	1307	367
25°	1207	1211	1220	1230	1232	556
35°	1071	1079	1096	1118	1122	671
45°	899	914	946	986	1003	693
55°	695	720	784	846	875	619
65°	459	506	610	690	722	456
75°	217	295	412	482	497	232
85°	42	87	106	115	119	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1347.1	1347.1	1347.1	1347.1	1347.1
2.5°	1349.2	1349.2	1342.9	1347.1	1347.1
5°	1347.1	1345.0	1338.6	1345.0	1345.0
7.5°	1340.7	1338.6	1334.4	1340.7	1338.6
10°	1328.0	1328.0	1323.7	1330.1	1330.1
12.5°	1317.4	1315.2	1313.1	1321.6	1319.5
15°	1300.4	1300.4	1298.2	1308.9	1306.7
17.5°	1279.1	1281.2	1283.4	1291.9	1294.0
20°	1255.7	1260.0	1262.1	1274.9	1274.9
22.5°	1234.5	1236.6	1240.9	1253.6	1253.6
25°	1206.9	1211.1	1219.6	1230.2	1232.4
27.5°	1179.2	1181.4	1192.0	1206.9	1209.0
30°	1143.1	1149.5	1162.2	1179.2	1181.4
32.5°	1111.3	1117.6	1132.5	1149.5	1153.7
35°	1070.9	1079.4	1096.4	1117.6	1121.9
37.5°	1034.8	1041.1	1062.4	1085.8	1092.1
40°	990.1	1002.9	1024.1	1051.8	1062.4
42.5°	945.5	958.3	983.8	1019.9	1032.6
45°	898.8	913.6	945.5	985.9	1002.9
47.5°	852.0	869.0	905.2	951.9	971.0
50°	798.9	820.2	864.8	917.9	939.1
52.5°	747.9	773.4	822.3	881.8	909.4
55°	694.8	720.3	784.0	845.7	875.4
57.5°	635.3	669.3	739.4	809.5	841.4
60°	580.1	611.9	696.9	773.4	805.3
62.5°	520.6	563.1	654.4	735.2	767.0
65°	458.9	505.7	609.8	690.5	722.4
67.5°	403.7	454.7	565.2	645.9	677.8
70°	337.8	401.6	516.3	597.1	628.9
72.5°	276.2	346.3	465.3	543.9	573.7
75°	216.7	295.3	412.2	482.3	497.2
77.5°	161.5	244.3	357.0	386.7	376.1
80°	114.7	195.5	278.3	263.5	269.8
82.5°	74.4	148.7	172.1	195.5	201.9
85°	42.5	87.1	106.2	114.7	119.0
87.5°	19.1	31.9	42.5	42.5	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)