

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: P388784

Luminaire Tested: **24CZ2-50HE-SQR-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: P388784
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50HE-SQR-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4119.1 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

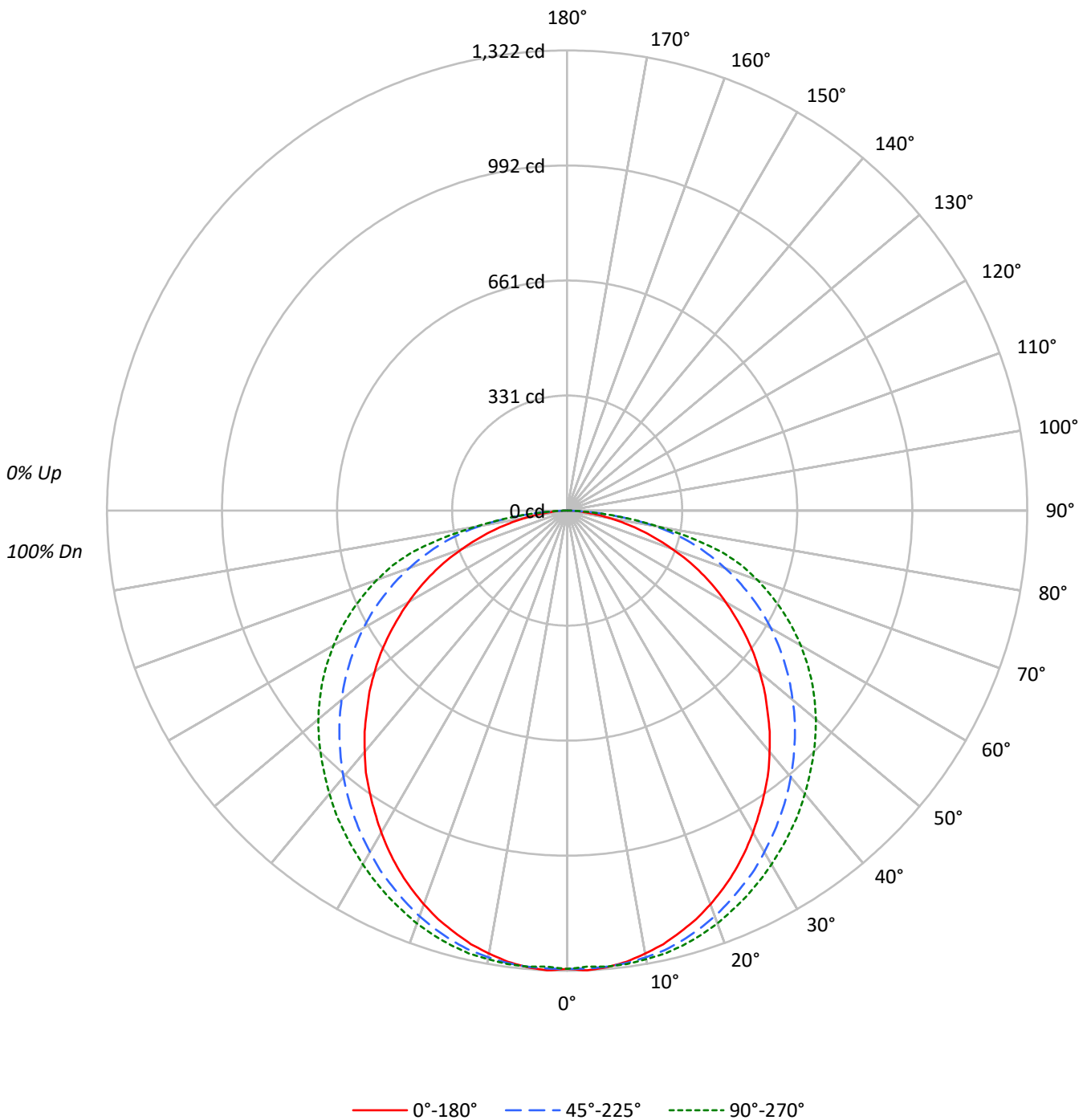
Input Watts (W): 38.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1772	1772	1772
5°	1778	1776	1776
10°	1765	1780	1788
15°	1747	1781	1800
20°	1724	1776	1807
25°	1694	1767	1813
30°	1659	1760	1824
35°	1624	1756	1841
40°	1589	1756	1866
45°	1548	1760	1902
50°	1512	1771	1953
55°	1468	1790	2013
60°	1417	1819	2086
65°	1355	1854	2174
70°	1257	1900	2285
75°	1138	1966	2390
80°	959	1971	2055
85°	735	1491	1491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.0	3.0
10°-20°	359.6	8.7
20°-30°	546.2	13.3
30°-40°	664.4	16.1
40°-50°	707.3	17.2
50°-60°	673.7	16.4
60°-70°	563.4	13.7
70°-80°	375.6	9.1
80°-90°	103.9	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°	1030.8	25.0
0°-40°	1695.1	41.2
0°-60°	3076.1	74.7
0°-90°	4119.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4119.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1317	1317	1317	1317	1317	
5°	1317	1308	1315	1315	1315	125
15°	1254	1257	1279	1288	1292	354
25°	1141	1156	1190	1211	1222	525
35°	989	1017	1069	1104	1121	619
45°	813	857	925	977	1000	629
55°	626	680	763	830	858	559
65°	426	488	582	654	683	421
75°	219	288	378	442	460	232
85°	48	88	97	95	97	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1316.7	1316.7	1316.7	1316.7	1316.7
2.5°	1322.1	1312.6	1316.7	1316.7	1311.2
5°	1316.7	1308.5	1315.3	1315.3	1315.3
7.5°	1307.1	1300.3	1311.2	1313.9	1313.9
10°	1292.2	1289.5	1303.1	1307.1	1308.5
12.5°	1275.9	1274.5	1293.5	1299.0	1303.1
15°	1254.1	1256.8	1278.6	1288.1	1292.2
17.5°	1231.0	1236.4	1260.9	1274.5	1278.6
20°	1203.8	1211.9	1240.5	1254.1	1262.3
22.5°	1173.8	1186.1	1216.0	1232.3	1241.9
25°	1141.2	1156.2	1190.2	1210.6	1221.5
27.5°	1105.8	1124.9	1164.3	1187.4	1198.3
30°	1067.7	1089.5	1133.0	1160.2	1173.8
32.5°	1028.3	1054.1	1101.8	1131.7	1148.0
35°	988.9	1017.4	1069.1	1104.5	1120.8
37.5°	949.4	978.0	1035.1	1073.2	1093.6
40°	904.5	938.5	999.7	1041.9	1062.3
42.5°	861.0	897.7	963.0	1009.3	1031.0
45°	813.4	856.9	924.9	976.6	999.7
47.5°	769.9	813.4	886.8	941.3	967.1
50°	722.3	768.5	846.0	905.9	933.1
52.5°	676.0	723.6	805.2	869.2	896.4
55°	625.7	680.1	763.1	829.7	858.3
57.5°	575.4	633.8	719.5	788.9	817.5
60°	526.4	586.2	676.0	745.4	775.3
62.5°	477.4	537.3	631.1	701.9	730.4
65°	425.7	488.3	582.2	654.3	682.8
67.5°	374.1	439.3	533.2	605.3	632.5
70°	319.6	389.0	482.9	553.6	580.8
72.5°	269.3	338.7	431.2	500.6	526.4
75°	219.0	288.4	378.1	442.1	459.7
77.5°	170.0	239.4	319.6	361.8	365.9
80°	123.8	189.1	254.4	266.6	265.2
82.5°	83.0	141.5	175.5	176.8	180.9
85°	47.6	88.4	96.6	95.2	96.6
87.5°	19.0	31.3	27.2	20.4	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)