

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: P388807

Luminaire Tested: **24CZ2-50VHE-SQR-UNV-L940-CD1-SWPD1-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: P388807
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: 24CZ2-50VHE-SQR-UNV-L940-CD1-SWPD1-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: 4102.9 lumens
Efficiency: N/A
Efficacy: 125.5 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

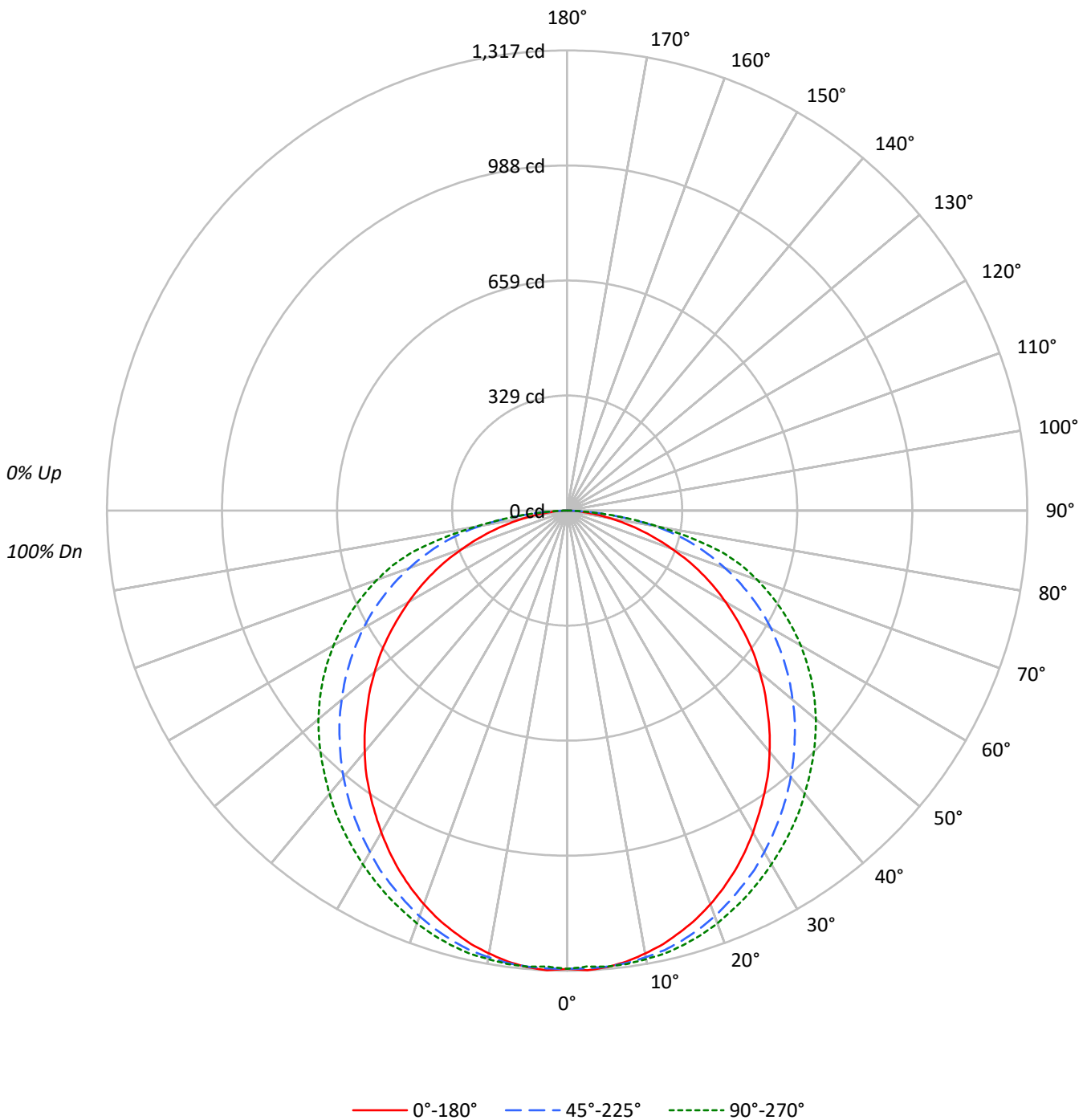
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1765	1765	1765
5°	1771	1769	1769
10°	1758	1773	1781
15°	1740	1774	1793
20°	1717	1769	1800
25°	1688	1760	1806
30°	1652	1753	1817
35°	1618	1749	1834
40°	1583	1749	1858
45°	1542	1753	1895
50°	1506	1764	1945
55°	1462	1783	2005
60°	1411	1812	2078
65°	1350	1846	2165
70°	1253	1892	2276
75°	1134	1958	2380
80°	955	1963	2047
85°	732	1485	1485



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	3.0
10°-20°	358.2	8.7
20°-30°	544.0	13.3
30°-40°	661.7	16.1
40°-50°	704.6	17.2
50°-60°	671.1	16.4
60°-70°	561.2	13.7
70°-80°	374.2	9.1
80°-90°	103.5	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°	1026.7	25.0
0°-40°	1688.4	41.2
0°-60°	3064.1	74.7
0°-90°	4102.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4102.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1312	1312	1312	1312	1312	
5°	1312	1303	1310	1310	1310	124
15°	1249	1252	1274	1283	1287	352
25°	1137	1152	1186	1206	1217	523
35°	985	1013	1065	1100	1116	616
45°	810	854	921	973	996	626
55°	623	677	760	826	855	557
65°	424	486	580	652	680	419
75°	218	287	377	440	458	231
85°	47	88	96	95	96	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1311.5	1311.5	1311.5	1311.5	1311.5
2.5°	1316.9	1307.4	1311.5	1311.5	1306.1
5°	1311.5	1303.4	1310.1	1310.1	1310.1
7.5°	1302.0	1295.2	1306.1	1308.8	1308.8
10°	1287.1	1284.4	1297.9	1302.0	1303.4
12.5°	1270.8	1269.5	1288.5	1293.9	1297.9
15°	1249.2	1251.9	1273.6	1283.0	1287.1
17.5°	1226.1	1231.6	1255.9	1269.5	1273.6
20°	1199.0	1207.2	1235.6	1249.2	1257.3
22.5°	1169.2	1181.4	1211.2	1227.5	1237.0
25°	1136.7	1151.6	1185.5	1205.8	1216.6
27.5°	1101.5	1120.5	1159.7	1182.8	1193.6
30°	1063.6	1085.2	1128.6	1155.7	1169.2
32.5°	1024.3	1050.0	1097.4	1127.2	1143.5
35°	985.0	1013.4	1064.9	1100.1	1116.4
37.5°	945.7	974.1	1031.0	1069.0	1089.3
40°	901.0	934.8	995.8	1037.8	1058.1
42.5°	857.6	894.2	959.2	1005.3	1027.0
45°	810.2	853.6	921.3	972.8	995.8
47.5°	766.8	810.2	883.4	937.6	963.3
50°	719.4	765.5	842.7	902.3	929.4
52.5°	673.4	720.8	802.1	865.7	892.8
55°	623.2	677.4	760.1	826.5	854.9
57.5°	573.1	631.4	716.7	785.8	814.3
60°	524.3	583.9	673.4	742.5	772.3
62.5°	475.5	535.2	628.6	699.1	727.5
65°	424.1	486.4	579.9	651.7	680.1
67.5°	372.6	437.6	531.1	602.9	630.0
70°	318.4	387.5	481.0	551.4	578.5
72.5°	268.3	337.4	429.5	498.6	524.3
75°	218.1	287.2	376.6	440.3	457.9
77.5°	169.4	238.5	318.4	360.4	364.5
80°	123.3	188.3	253.4	265.5	264.2
82.5°	82.6	140.9	174.8	176.1	180.2
85°	47.4	88.1	96.2	94.8	96.2
87.5°	19.0	31.2	27.1	20.3	20.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)