

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: P388851

Luminaire Tested: **24CZ2-50VHE-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: P388851
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50VHE-UNV-L940-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4220.6 lumens
Efficiency: N/A
Efficacy: 129.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

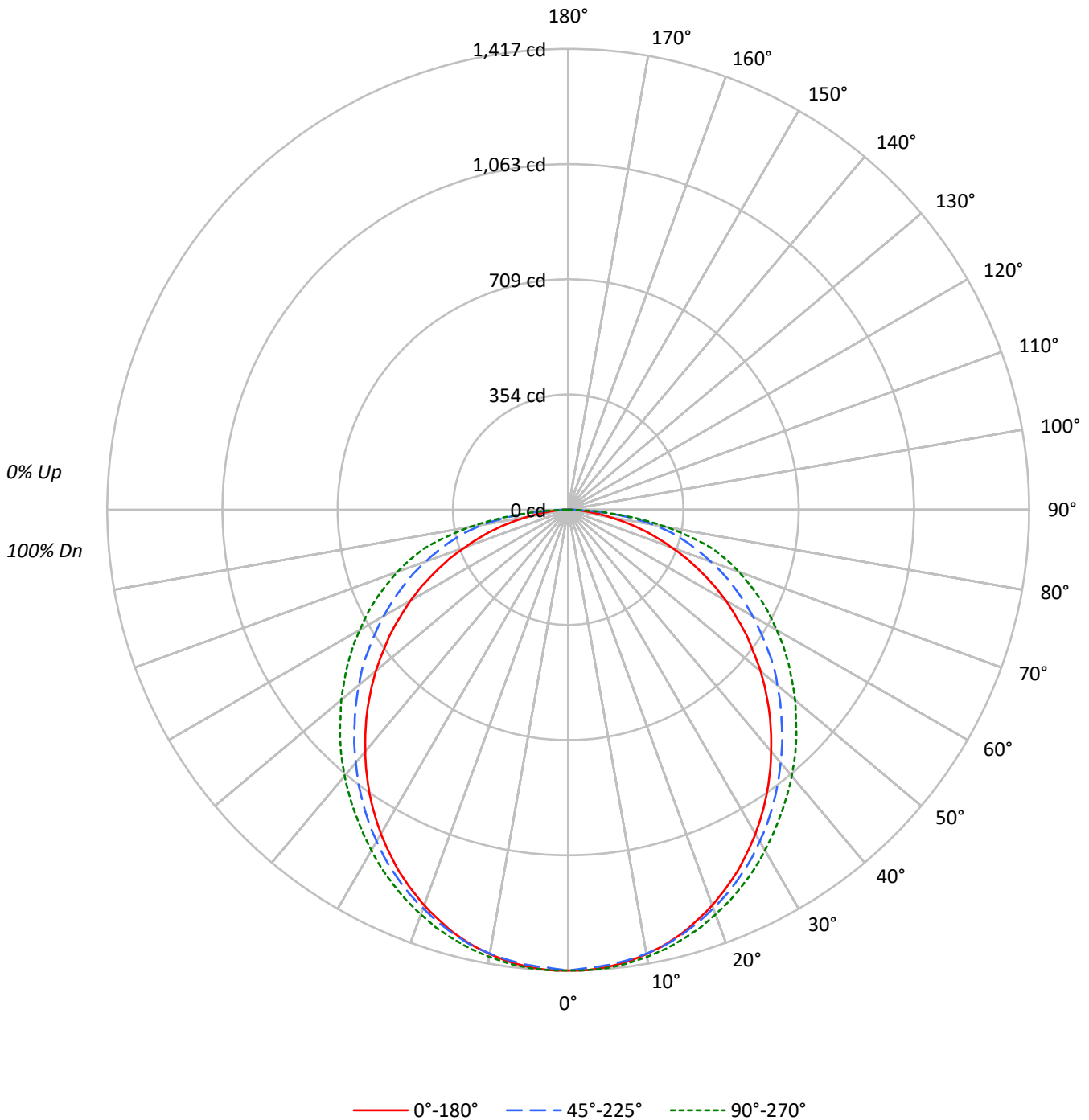
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1907	1907	1907
5°	1906	1899	1910
10°	1896	1894	1907
15°	1880	1884	1903
20°	1854	1868	1896
25°	1824	1851	1888
30°	1788	1830	1880
35°	1749	1807	1874
40°	1705	1784	1878
45°	1662	1766	1887
50°	1616	1757	1905
55°	1566	1755	1939
60°	1505	1763	1990
65°	1426	1789	2076
70°	1325	1834	2194
75°	1208	1926	2380
80°	993	2073	2380
85°	761	1914	2044



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.0	3.2
10°-20°	382.6	9.1
20°-30°	575.8	13.6
30°-40°	690.0	16.3
40°-50°	719.0	17.0
50°-60°	669.0	15.9
60°-70°	551.0	13.1
70°-80°	375.3	8.9
80°-90°	123.9	2.9
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°	1092.4	25.9
0°-40°	1782.4	42.2
0°-60°	3170.4	75.1
0°-90°	4220.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4220.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1417	1417	1417	1417	1417	
5°	1411	1411	1406	1413	1414	134
15°	1349	1351	1352	1365	1366	380
25°	1228	1234	1247	1268	1272	565
35°	1065	1078	1100	1130	1141	666
45°	873	892	928	975	992	674
55°	668	690	748	807	827	595
65°	448	486	562	628	652	445
75°	232	284	370	437	458	245
85°	49	96	124	132	132	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1417.1	1417.1	1417.1	1417.1	1417.1
2.5°	1417.1	1417.1	1410.0	1417.1	1417.1
5°	1411.4	1411.4	1405.8	1412.8	1414.2
7.5°	1401.6	1403.0	1397.3	1405.8	1407.2
10°	1387.5	1388.9	1386.1	1394.5	1395.9
12.5°	1370.6	1372.0	1372.0	1381.8	1383.2
15°	1349.4	1350.8	1352.3	1364.9	1366.3
17.5°	1322.7	1326.9	1329.7	1345.2	1348.0
20°	1294.5	1298.7	1304.4	1321.3	1324.1
22.5°	1262.1	1267.7	1277.6	1295.9	1300.1
25°	1228.3	1233.9	1246.6	1267.7	1272.0
27.5°	1190.3	1198.7	1214.2	1236.8	1242.4
30°	1150.8	1159.3	1177.6	1201.5	1210.0
32.5°	1108.6	1119.8	1141.0	1167.7	1176.2
35°	1064.9	1077.6	1100.1	1129.7	1141.0
37.5°	1018.4	1032.5	1059.3	1091.7	1105.8
40°	970.5	987.4	1015.6	1053.6	1069.1
42.5°	922.6	938.1	973.3	1014.2	1031.1
45°	873.3	891.6	928.3	974.8	991.7
47.5°	822.6	840.9	884.6	933.9	949.4
50°	771.9	790.2	839.5	891.6	910.0
52.5°	717.0	740.9	797.3	849.4	867.7
55°	667.7	690.2	748.0	807.1	826.8
57.5°	611.3	638.1	701.5	763.5	784.6
60°	559.2	587.4	655.0	718.4	739.5
62.5°	505.7	536.7	608.5	673.3	697.3
65°	447.9	486.0	562.0	628.2	652.2
67.5°	395.8	435.3	515.5	583.2	604.3
70°	336.7	384.5	466.2	533.9	557.8
72.5°	285.9	333.8	419.8	486.0	509.9
75°	232.4	284.5	370.5	436.7	457.8
77.5°	178.9	236.6	322.6	373.3	380.3
80°	128.2	188.8	267.6	297.2	307.1
82.5°	90.2	145.1	197.2	216.9	222.6
85°	49.3	95.8	124.0	132.4	132.4
87.5°	21.1	40.8	49.3	50.7	52.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)