

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: P389788

Luminaire Tested: **24CZ2-50VHE-S-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: P389788
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50VHE-S-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4488.9 lumens
Efficiency: N/A
Efficacy: 137.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

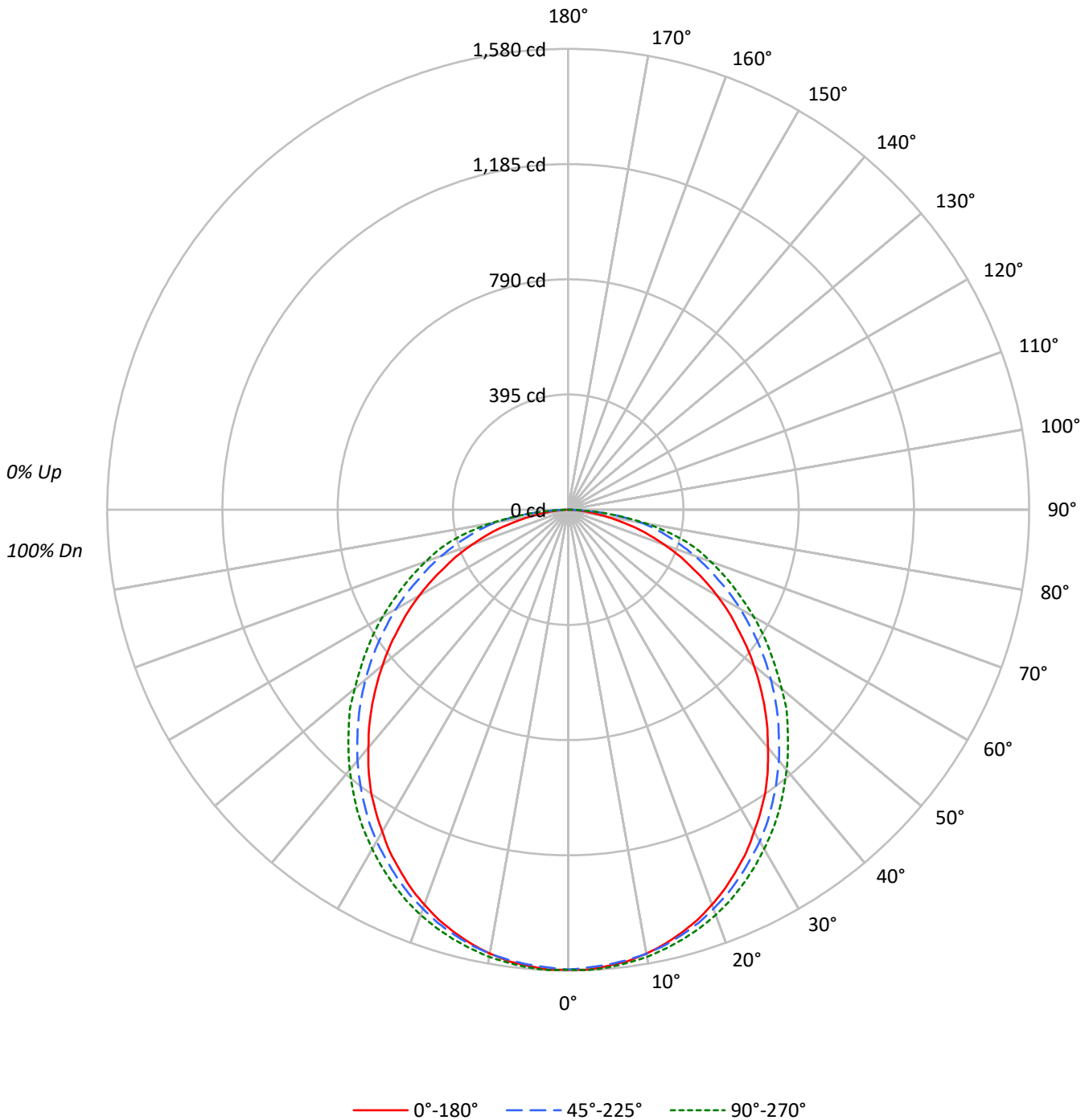
Input Watts (W): 32.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2122	2122	2122
5°	2120	2115	2128
10°	2112	2112	2127
15°	2091	2101	2123
20°	2064	2084	2117
25°	2026	2064	2104
30°	1980	2040	2087
35°	1937	2007	2070
40°	1871	1974	2046
45°	1810	1934	2024
50°	1740	1898	2000
55°	1662	1863	1980
60°	1585	1834	1976
65°	1484	1802	1988
70°	1374	1812	2042
75°	1231	1845	2157
80°	994	1956	2110
85°	749	1717	1673



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.3	3.3
10°-20°	426.6	9.5
20°-30°	641.3	14.3
30°-40°	763.8	17.0
40°-50°	781.7	17.4
50°-60°	703.8	15.7
60°-70°	552.7	12.3
70°-80°	358.7	8.0
80°-90°	110.9	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°	1217.1	27.1
0°-40°	1981.0	44.1
0°-60°	3466.5	77.2
0°-90°	4488.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4488.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1577	1577	1577	1577	1577	
5°	1570	1573	1566	1574	1576	149
15°	1501	1506	1508	1521	1524	423
25°	1364	1376	1390	1413	1417	629
35°	1179	1193	1222	1252	1260	736
45°	951	974	1017	1055	1064	733
55°	709	740	794	836	844	635
65°	466	502	566	613	624	464
75°	237	282	355	404	415	250
85°	48	90	111	108	108	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1577.0	1577.0	1577.0	1577.0	1577.0
2.5°	1578.4	1578.4	1571.3	1578.4	1579.8
5°	1569.9	1572.7	1565.6	1574.1	1575.6
7.5°	1561.3	1561.3	1557.0	1565.6	1567.0
10°	1545.6	1547.0	1545.6	1555.6	1557.0
12.5°	1525.6	1528.5	1529.9	1539.9	1541.3
15°	1501.4	1505.7	1508.5	1521.4	1524.2
17.5°	1474.3	1478.6	1485.7	1500.0	1502.8
20°	1441.5	1447.2	1455.8	1474.3	1478.6
22.5°	1405.9	1411.6	1425.8	1443.0	1450.1
25°	1364.5	1375.9	1390.2	1413.0	1417.3
27.5°	1323.2	1333.2	1351.7	1375.9	1381.6
30°	1274.7	1290.4	1313.2	1337.4	1343.1
32.5°	1227.6	1243.3	1270.4	1296.1	1303.2
35°	1179.2	1193.4	1221.9	1251.9	1260.4
37.5°	1123.6	1142.1	1173.5	1203.4	1212.0
40°	1065.1	1087.9	1123.6	1154.9	1164.9
42.5°	1009.5	1033.7	1069.4	1103.6	1115.0
45°	951.0	973.8	1016.6	1055.1	1063.7
47.5°	891.2	916.8	962.4	1000.9	1015.2
50°	831.3	858.4	906.8	946.8	955.3
52.5°	771.4	799.9	851.2	894.0	898.3
55°	708.6	740.0	794.2	835.5	844.1
57.5°	651.6	678.7	737.2	779.9	789.9
60°	588.9	618.8	681.6	721.5	734.3
62.5°	529.0	560.4	625.9	665.9	677.3
65°	466.2	501.9	566.1	613.1	624.5
67.5°	412.1	446.3	514.7	560.4	571.8
70°	349.3	387.8	460.5	507.6	519.0
72.5°	295.1	335.1	407.8	453.4	470.5
75°	236.7	282.3	355.0	403.5	414.9
77.5°	179.7	232.4	306.6	343.6	343.6
80°	128.3	183.9	252.4	269.5	272.3
82.5°	84.1	138.3	186.8	185.4	185.4
85°	48.5	89.8	111.2	108.4	108.4
87.5°	18.5	37.1	39.9	39.9	38.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)