

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: P388390

Luminaire Tested: **22CZ2-60VHE-UNV-L930-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: P388390
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-60VHE-UNV-L930-CD1-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4978.6 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

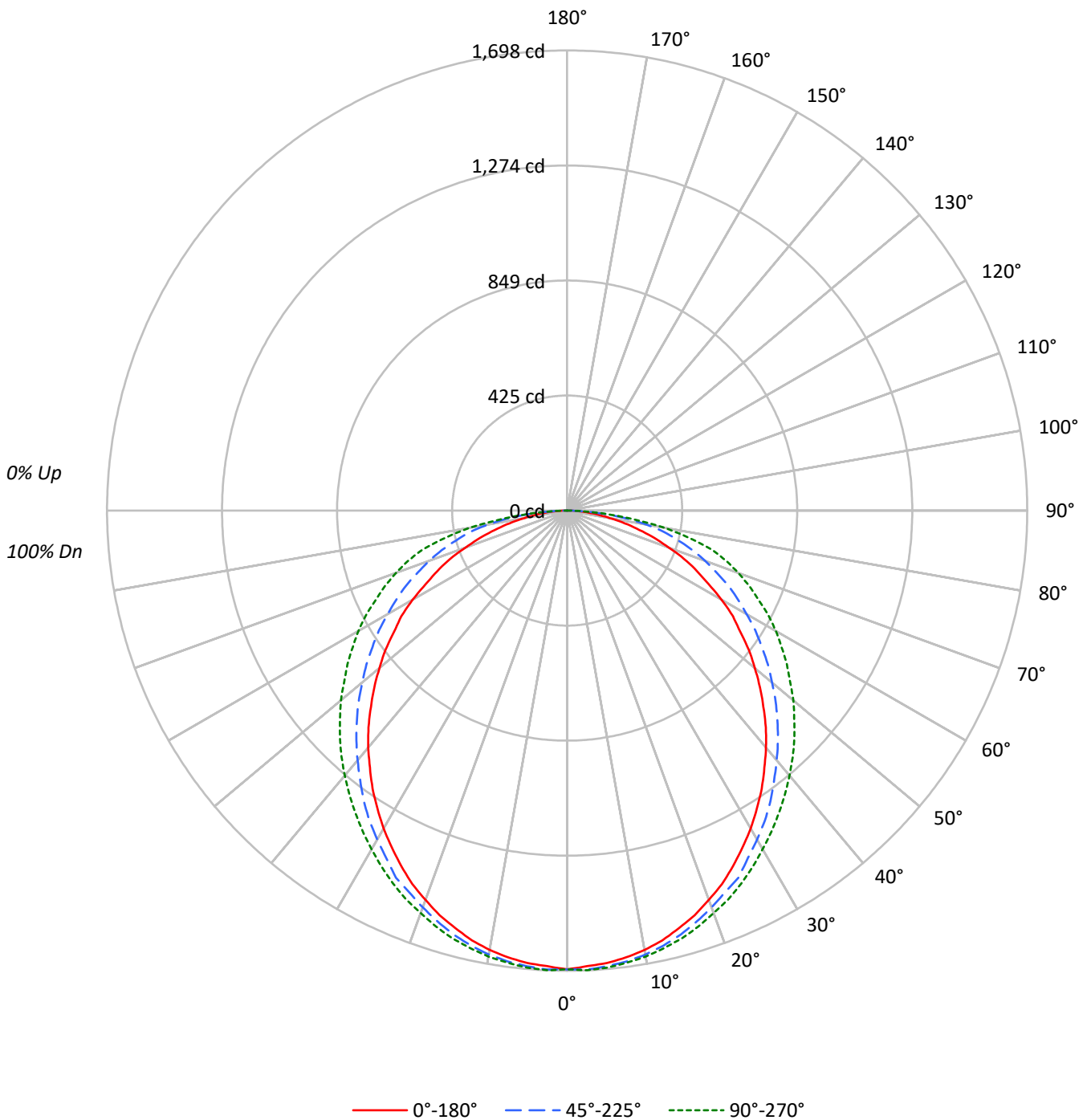
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388390

CATALOG NUMBER: 22CZ2-60VHE-UNV-L930-CD1-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388390

CATALOG NUMBER: 22CZ2-60VHE-UNV-L930-CD1-SWPD1-U

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	101	96	93	96	93	90		92	90	87		89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73		80	76	71		77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61		70	65	60		68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52		63	56	51		60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44		56	49	44		54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39		51	44	39		49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34		46	39	34		45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31		42	35	30		41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28		39	32	27		38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25		36	30	25		35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4555	4555	4555
5°	4526	4559	4573
10°	4499	4545	4565
15°	4443	4511	4552
20°	4378	4462	4525
25°	4299	4437	4510
30°	4209	4354	4483
35°	4113	4298	4475
40°	4010	4226	4483
45°	3897	4177	4512
50°	3785	4133	4564
55°	3655	4115	4643
60°	3547	4113	4786
65°	3370	4180	4960
70°	3142	4260	5281
75°	2878	4406	5706
80°	2506	4593	5619
85°	2192	4085	4462



TEST NUMBER: P388390

CATALOG NUMBER: 22CZ2-60VHE-UNV-L930-CD1-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.1	3.2
10°-20°	456.0	9.2
20°-30°	684.5	13.7
30°-40°	818.0	16.4
40°-50°	850.6	17.1
50°-60°	788.3	15.8
60°-70°	646.6	13.0
70°-80°	437.1	8.8
80°-90°	137.3	2.8
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°	1300.6	26.1
0°-40°	2118.6	42.6
0°-60°	3757.5	75.5
0°-90°	4978.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4978.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1693	1693	1693	1693	1693	
5°	1676	1678	1688	1690	1693	159
15°	1595	1602	1619	1629	1634	450
25°	1448	1460	1494	1512	1519	667
35°	1252	1269	1308	1347	1362	782
45°	1024	1044	1098	1161	1186	791
55°	779	804	877	955	990	700
65°	529	559	656	742	779	523
75°	277	323	424	510	549	294
85°	71	98	132	147	144	81
90°	0	0	0	0	0	



TEST NUMBER: P388390

CATALOG NUMBER: 22CZ2-60VHE-UNV-L930-CD1-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1692.8	1692.8	1692.8	1692.8	1692.8
2.5°	1683.0	1687.9	1695.3	1697.7	1697.7
5°	1675.7	1678.1	1687.9	1690.4	1692.8
7.5°	1663.4	1668.3	1678.1	1680.6	1683.0
10°	1646.3	1651.2	1663.4	1668.3	1670.8
12.5°	1624.2	1629.1	1643.8	1651.2	1653.6
15°	1594.8	1602.2	1619.3	1629.1	1634.0
17.5°	1565.4	1572.8	1589.9	1604.6	1609.5
20°	1528.7	1545.8	1558.1	1577.7	1580.1
22.5°	1491.9	1501.7	1523.8	1543.4	1553.2
25°	1447.8	1460.1	1494.4	1511.5	1518.9
27.5°	1401.3	1418.4	1445.4	1472.3	1482.1
30°	1354.7	1367.0	1401.3	1433.1	1442.9
32.5°	1303.3	1320.4	1357.2	1389.0	1403.7
35°	1251.9	1269.0	1308.2	1347.4	1362.1
37.5°	1195.5	1215.1	1254.3	1300.8	1320.4
40°	1141.6	1156.3	1202.9	1259.2	1276.3
42.5°	1085.3	1102.4	1151.4	1212.7	1232.3
45°	1024.0	1043.6	1097.5	1161.2	1185.7
47.5°	965.2	984.8	1043.6	1107.3	1136.7
50°	904.0	928.5	987.3	1060.8	1090.2
52.5°	845.2	867.2	933.4	1009.3	1036.3
55°	779.0	803.5	877.0	955.4	989.7
57.5°	725.1	742.3	823.1	904.0	938.3
60°	659.0	681.0	764.3	850.1	889.3
62.5°	588.0	624.7	710.4	798.6	837.8
65°	529.2	558.6	656.5	742.3	779.0
67.5°	467.9	499.8	595.3	685.9	727.6
70°	399.3	441.0	541.4	632.0	671.2
72.5°	338.1	382.2	485.1	573.3	614.9
75°	276.8	323.4	423.8	509.6	548.8
77.5°	218.0	269.5	367.5	433.6	458.1
80°	161.7	210.7	296.4	343.0	362.6
82.5°	112.7	154.3	218.0	242.5	247.4
85°	71.0	98.0	132.3	147.0	144.5
87.5°	31.8	39.2	49.0	53.9	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)