

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: P389470

Luminaire Tested: **22CZ2-90VHE-S-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: P389470
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-90VHE-S-UNV-L930-CD1-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7812.6 lumens
Efficiency: N/A
Efficacy: 114.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

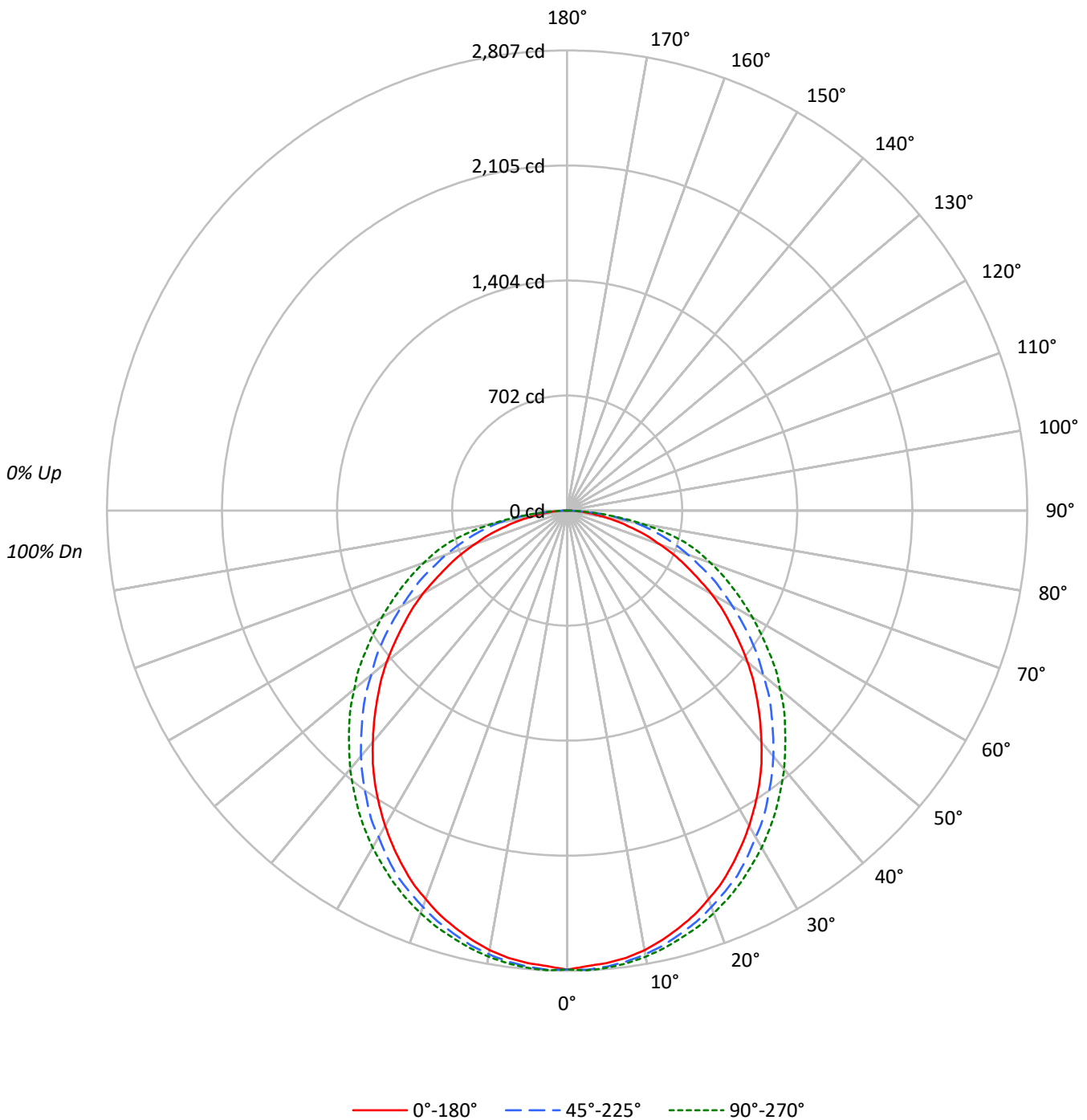
Input Watts (W): 68.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7533	7533	7533
5°	7483	7542	7562
10°	7440	7510	7550
15°	7342	7444	7515
20°	7224	7370	7485
25°	7078	7295	7435
30°	6898	7147	7374
35°	6706	7017	7305
40°	6479	6876	7235
45°	6242	6714	7158
50°	6013	6531	7096
55°	5729	6413	7046
60°	5473	6258	7023
65°	5106	6220	7102
70°	4703	6166	7313
75°	4245	6254	7694
80°	3671	6440	7231
85°	3038	5403	5403



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.7	3.4
10°-20°	753.4	9.6
20°-30°	1127.3	14.4
30°-40°	1335.0	17.1
40°-50°	1360.5	17.4
50°-60°	1219.4	15.6
60°-70°	954.7	12.2
70°-80°	615.6	7.9
80°-90°	181.9	2.3
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°	2145.5	27.5
0°-40°	3480.5	44.5
0°-60°	6060.4	77.6
0°-90°	7812.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7812.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2800	2800	2800	2800	2800	
5°	2770	2778	2792	2796	2800	263
15°	2636	2650	2672	2694	2697	743
25°	2384	2406	2457	2490	2504	1097
35°	2041	2067	2136	2202	2224	1276
45°	1640	1677	1764	1855	1881	1267
55°	1221	1261	1367	1462	1502	1095
65°	802	849	977	1072	1115	797
75°	408	470	602	704	740	438
85°	98	135	175	175	175	116
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2799.5	2799.5	2799.5	2799.5	2799.5
2.5°	2781.3	2788.6	2803.1	2806.8	2806.8
5°	2770.3	2777.6	2792.2	2795.9	2799.5
7.5°	2752.1	2755.8	2774.0	2781.3	2784.9
10°	2722.9	2730.2	2748.5	2759.4	2763.0
12.5°	2682.9	2693.8	2715.7	2730.2	2733.9
15°	2635.5	2650.0	2671.9	2693.8	2697.4
17.5°	2584.4	2599.0	2628.2	2653.7	2661.0
20°	2522.5	2540.7	2573.5	2602.7	2613.6
22.5°	2460.5	2475.1	2515.2	2551.6	2562.6
25°	2383.9	2405.8	2456.9	2489.7	2504.2
27.5°	2303.8	2329.3	2380.3	2424.0	2438.6
30°	2219.9	2245.4	2300.1	2354.8	2373.0
32.5°	2132.4	2161.6	2227.2	2281.9	2300.1
35°	2041.3	2066.8	2136.1	2201.7	2223.6
37.5°	1946.5	1968.4	2048.6	2117.8	2139.7
40°	1844.5	1873.6	1957.5	2037.7	2059.5
42.5°	1742.4	1775.2	1859.0	1946.5	1968.4
45°	1640.3	1676.8	1764.3	1855.4	1880.9
47.5°	1541.9	1571.1	1669.5	1757.0	1793.4
50°	1436.2	1465.4	1560.1	1658.6	1695.0
52.5°	1326.8	1366.9	1469.0	1563.8	1607.5
55°	1221.1	1261.2	1366.9	1461.7	1501.8
57.5°	1122.7	1155.5	1264.9	1363.3	1403.4
60°	1017.0	1046.2	1162.8	1268.5	1305.0
62.5°	904.0	947.7	1068.0	1166.5	1210.2
65°	801.9	849.3	976.9	1071.7	1115.4
67.5°	707.2	750.9	874.8	976.9	1024.3
70°	597.8	656.1	783.7	885.8	929.5
72.5°	510.3	561.4	692.6	794.6	842.0
75°	408.3	470.2	601.5	703.5	740.0
77.5°	324.4	386.4	510.3	590.5	608.7
80°	236.9	298.9	415.6	455.6	466.6
82.5°	160.4	218.7	298.9	309.8	313.5
85°	98.4	134.9	175.0	175.0	175.0
87.5°	47.4	54.7	62.0	58.3	58.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)