

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: P390501

Luminaire Tested: **22CZ2-60VHE-HRP-UNV-L930-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: P390501
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-60VHE-HRP-UNV-L930-CD1-SDWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4175.1 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

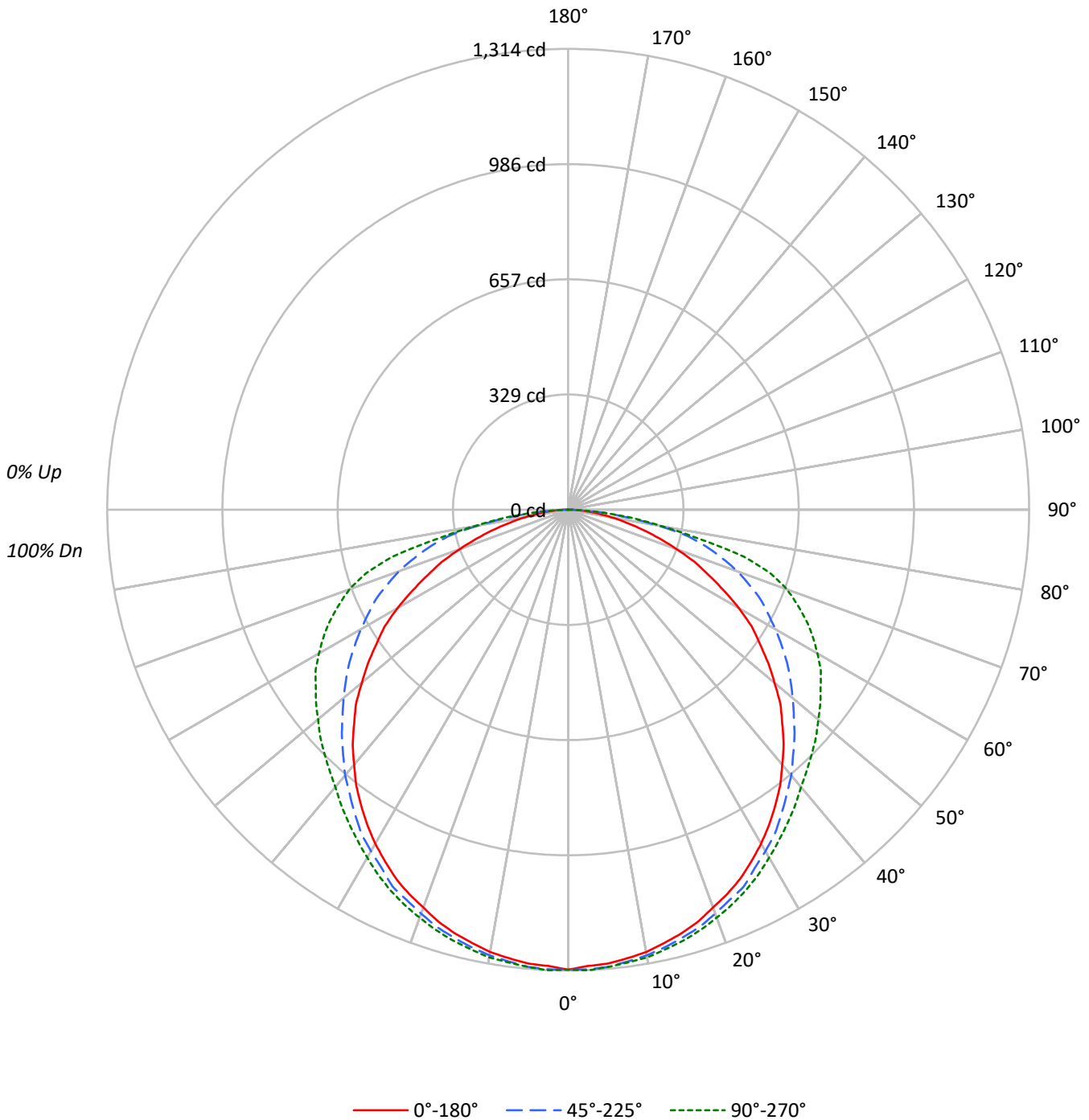
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3529	3529	3529
5°	3509	3534	3534
10°	3500	3525	3542
15°	3482	3517	3542
20°	3456	3509	3545
25°	3447	3520	3556
30°	3416	3493	3560
35°	3380	3481	3582
40°	3334	3474	3625
45°	3285	3471	3740
50°	3214	3497	3896
55°	3127	3574	4121
60°	3025	3669	4414
65°	2816	3853	4772
70°	2585	4035	5220
75°	2268	4247	5397
80°	1951	4046	4237
85°	1707	2939	3223



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.1	3.0
10°-20°	356.2	8.5
20°-30°	543.4	13.0
30°-40°	663.5	15.9
40°-50°	709.5	17.0
50°-60°	684.8	16.4
60°-70°	589.5	14.1
70°-80°	398.8	9.6
80°-90°	105.2	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°	1023.7	24.5
0°-40°	1687.2	40.4
0°-60°	3081.5	73.8
0°-90°	4175.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4175.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1312	1312	1312	1312	1312	
5°	1299	1302	1308	1308	1308	123
15°	1250	1253	1262	1268	1272	353
25°	1161	1167	1186	1192	1198	534
35°	1029	1038	1060	1081	1090	644
45°	863	878	912	958	983	666
55°	666	688	762	838	878	597
65°	442	485	605	700	749	440
75°	218	289	408	491	519	234
85°	55	77	95	98	104	62
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°	1302.3	1305.3	1311.5	1311.5	1314.5
5°	1299.2	1302.3	1308.4	1308.4	1308.4
7.5°	1290.0	1293.0	1299.2	1302.3	1302.3
10°	1280.8	1283.8	1290.0	1293.0	1296.1
12.5°	1265.4	1268.5	1277.7	1283.8	1283.8
15°	1250.0	1253.1	1262.3	1268.5	1271.5
17.5°	1231.6	1237.8	1247.0	1253.1	1256.2
20°	1207.0	1213.2	1225.5	1234.7	1237.8
22.5°	1185.5	1191.7	1204.0	1213.2	1219.3
25°	1161.0	1167.1	1185.5	1191.7	1197.8
27.5°	1130.3	1136.4	1151.8	1164.0	1173.3
30°	1099.5	1105.7	1124.1	1139.5	1145.6
32.5°	1065.8	1075.0	1096.5	1108.8	1118.0
35°	1028.9	1038.1	1059.6	1081.1	1090.3
37.5°	992.0	1001.3	1022.8	1050.4	1062.7
40°	949.1	961.3	989.0	1025.8	1032.0
42.5°	909.1	924.5	949.1	992.0	1007.4
45°	863.1	878.4	912.2	958.3	982.8
47.5°	820.1	835.4	872.3	927.6	958.3
50°	767.8	789.3	835.4	899.9	930.6
52.5°	718.7	737.1	798.6	869.2	906.1
55°	666.5	688.0	761.7	838.5	878.4
57.5°	620.4	638.8	721.8	807.8	853.8
60°	562.1	586.6	681.8	774.0	820.1
62.5°	500.6	537.5	641.9	737.1	786.3
65°	442.3	485.3	605.1	700.3	749.4
67.5°	390.1	436.1	559.0	660.3	706.4
70°	328.6	387.0	512.9	611.2	663.4
72.5°	273.4	337.8	460.7	559.0	605.1
75°	218.1	288.7	408.5	491.4	519.1
77.5°	168.9	236.5	350.1	374.7	377.8
80°	125.9	187.4	261.1	264.1	273.4
82.5°	86.0	132.1	168.9	184.3	187.4
85°	55.3	76.8	95.2	98.3	104.4
87.5°	24.6	27.6	33.8	30.7	30.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)