

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: P390508

Luminaire Tested: **22CZ2-60VHE-HRP-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: P390508
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-L940-CD1-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4375.4 lumens
Efficiency: N/A
Efficacy: 99.2 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

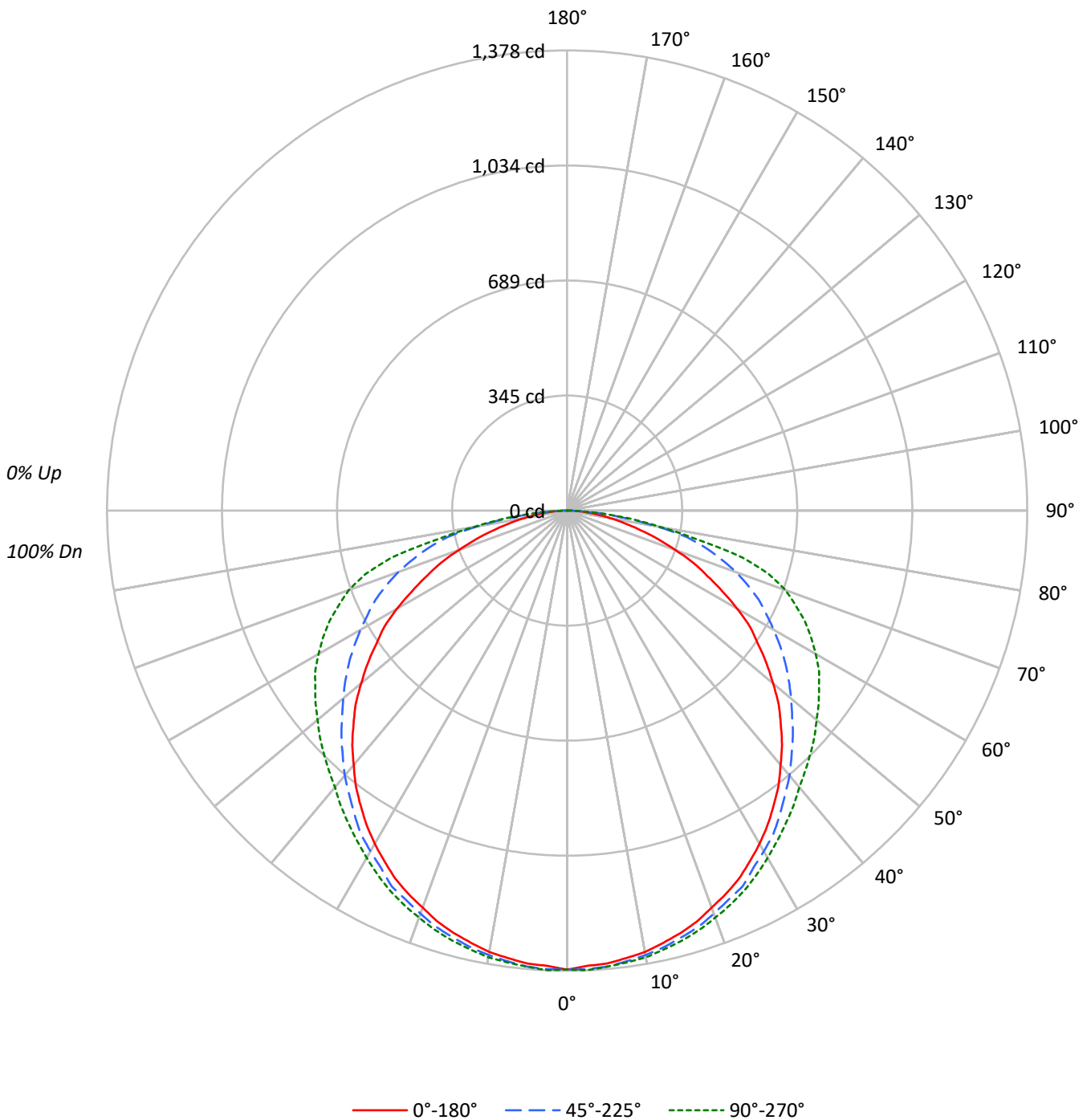
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3698	3698	3698
5°	3678	3704	3704
10°	3668	3694	3712
15°	3650	3685	3712
20°	3623	3678	3714
25°	3613	3689	3727
30°	3581	3660	3731
35°	3542	3648	3754
40°	3494	3641	3799
45°	3442	3638	3920
50°	3369	3665	4083
55°	3277	3745	4319
60°	3170	3846	4625
65°	2951	4038	5001
70°	2710	4229	5470
75°	2376	4451	5656
80°	2046	4240	4440
85°	1788	3081	3378



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.0	3.0
10°-20°	373.3	8.5
20°-30°	569.5	13.0
30°-40°	695.4	15.9
40°-50°	743.5	17.0
50°-60°	717.7	16.4
60°-70°	617.8	14.1
70°-80°	418.0	9.6
80°-90°	110.3	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°	1072.8	24.5
0°-40°	1768.2	40.4
0°-60°	3229.4	73.8
0°-90°	4375.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4375.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1374	1374	1374	1374	1374	
5°	1362	1365	1371	1371	1371	129
15°	1310	1313	1323	1329	1332	370
25°	1217	1223	1242	1249	1255	560
35°	1078	1088	1110	1133	1143	675
45°	904	921	956	1004	1030	698
55°	698	721	798	879	921	626
65°	464	509	634	734	785	461
75°	228	303	428	515	544	245
85°	58	80	100	103	109	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1374.4	1374.4	1374.4	1374.4	1374.4
2.5°	1364.7	1368.0	1374.4	1374.4	1377.6
5°	1361.5	1364.7	1371.2	1371.2	1371.2
7.5°	1351.9	1355.1	1361.5	1364.7	1364.7
10°	1342.2	1345.4	1351.9	1355.1	1358.3
12.5°	1326.1	1329.3	1339.0	1345.4	1345.4
15°	1310.0	1313.2	1322.9	1329.3	1332.5
17.5°	1290.7	1297.1	1306.8	1313.2	1316.5
20°	1265.0	1271.4	1284.3	1293.9	1297.1
22.5°	1242.4	1248.9	1261.7	1271.4	1277.8
25°	1216.7	1223.1	1242.4	1248.9	1255.3
27.5°	1184.5	1190.9	1207.0	1219.9	1229.5
30°	1152.3	1158.7	1178.0	1194.1	1200.6
32.5°	1116.9	1126.5	1149.1	1162.0	1171.6
35°	1078.3	1087.9	1110.5	1133.0	1142.6
37.5°	1039.6	1049.3	1071.8	1100.8	1113.7
40°	994.6	1007.5	1036.4	1075.0	1081.5
42.5°	952.7	968.8	994.6	1039.6	1055.7
45°	904.5	920.6	956.0	1004.2	1030.0
47.5°	859.4	875.5	914.1	972.1	1004.2
50°	804.7	827.2	875.5	943.1	975.3
52.5°	753.2	772.5	836.9	910.9	949.5
55°	698.5	721.0	798.2	878.7	920.6
57.5°	650.2	669.5	756.4	846.5	894.8
60°	589.0	614.8	714.6	811.1	859.4
62.5°	524.6	563.3	672.7	772.5	824.0
65°	463.5	508.6	634.1	733.9	785.4
67.5°	408.8	457.1	585.8	692.0	740.3
70°	344.4	405.6	537.5	640.5	695.2
72.5°	286.5	354.1	482.8	585.8	634.1
75°	228.5	302.6	428.1	515.0	544.0
77.5°	177.0	247.8	366.9	392.7	395.9
80°	132.0	196.3	273.6	276.8	286.5
82.5°	90.1	138.4	177.0	193.1	196.3
85°	57.9	80.5	99.8	103.0	109.4
87.5°	25.7	29.0	35.4	32.2	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)