

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: P390507

Luminaire Tested: **22CZ2-60VHE-HRP-UNV-L940-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: P390507
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-SDWPD1-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: 4322.6 lumens
Efficiency: N/A
Efficacy: 98.0 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

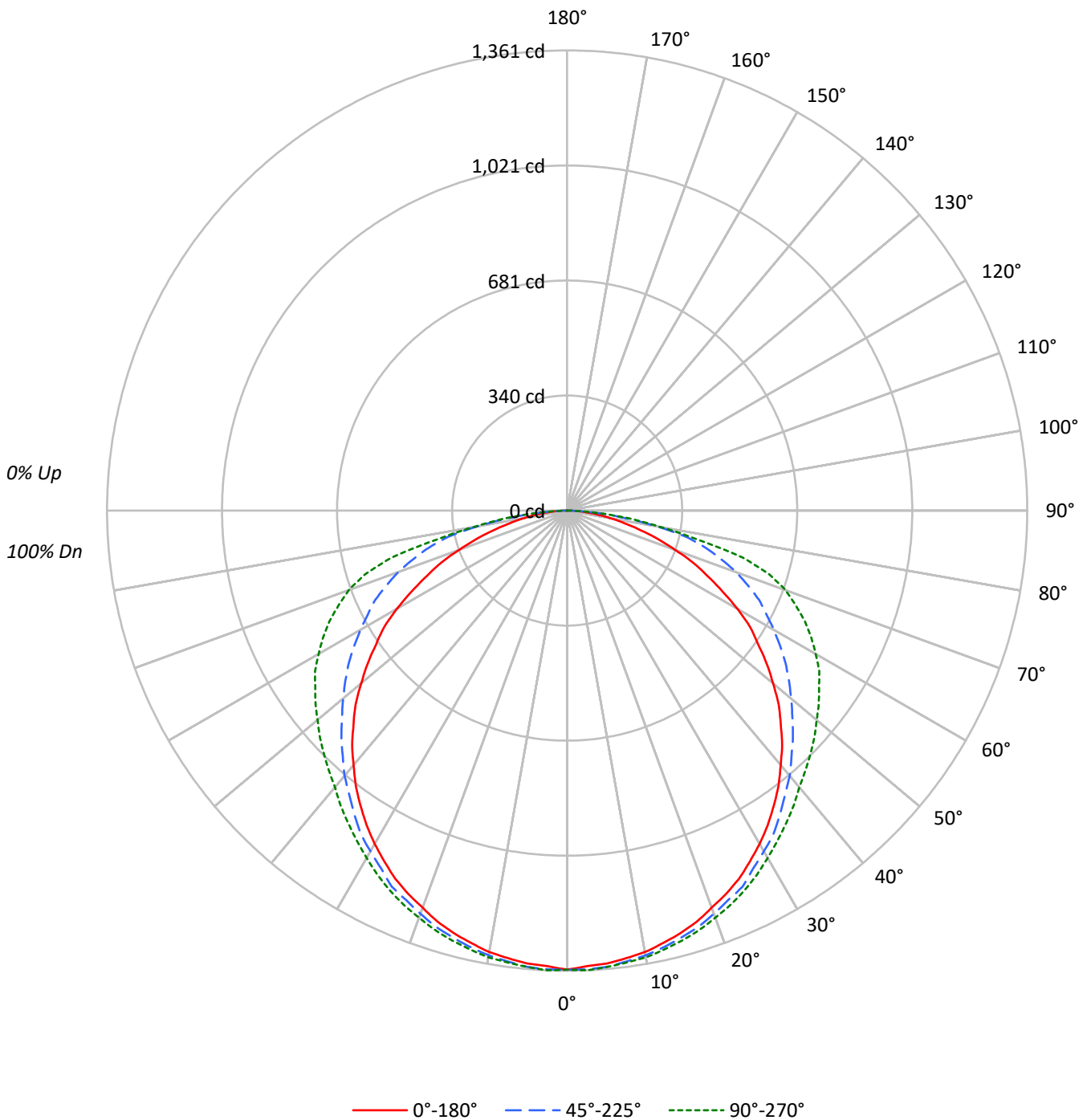
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3654	3654	3654
5°	3633	3659	3659
10°	3623	3649	3667
15°	3606	3641	3668
20°	3579	3633	3670
25°	3569	3644	3682
30°	3537	3616	3686
35°	3500	3604	3709
40°	3452	3597	3753
45°	3400	3594	3873
50°	3328	3621	4034
55°	3237	3700	4267
60°	3132	3799	4569
65°	2916	3989	4940
70°	2677	4178	5404
75°	2348	4397	5587
80°	2021	4189	4386
85°	1766	3044	3338



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.4	3.0
10°-20°	368.8	8.5
20°-30°	562.6	13.0
30°-40°	687.0	15.9
40°-50°	734.5	17.0
50°-60°	709.0	16.4
60°-70°	610.3	14.1
70°-80°	412.9	9.6
80°-90°	109.0	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°	1059.8	24.5
0°-40°	1746.8	40.4
0°-60°	3190.4	73.8
0°-90°	4322.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4322.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1358	1358	1358	1358	1358	
5°	1345	1348	1355	1355	1355	128
15°	1294	1297	1307	1313	1316	365
25°	1202	1208	1227	1234	1240	553
35°	1065	1075	1097	1119	1129	667
45°	894	909	944	992	1018	690
55°	690	712	789	868	909	618
65°	458	502	626	725	776	455
75°	226	299	423	509	537	242
85°	57	80	99	102	108	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1357.8	1357.8	1357.8	1357.8	1357.8
2.5°	1348.3	1351.4	1357.8	1357.8	1361.0
5°	1345.1	1348.3	1354.6	1354.6	1354.6
7.5°	1335.5	1338.7	1345.1	1348.3	1348.3
10°	1326.0	1329.2	1335.5	1338.7	1341.9
12.5°	1310.1	1313.3	1322.8	1329.2	1329.2
15°	1294.2	1297.4	1306.9	1313.3	1316.5
17.5°	1275.1	1281.5	1291.0	1297.4	1300.6
20°	1249.7	1256.0	1268.8	1278.3	1281.5
22.5°	1227.4	1233.8	1246.5	1256.0	1262.4
25°	1202.0	1208.4	1227.4	1233.8	1240.1
27.5°	1170.2	1176.6	1192.5	1205.2	1214.7
30°	1138.4	1144.8	1163.8	1179.7	1186.1
32.5°	1103.4	1113.0	1135.2	1147.9	1157.5
35°	1065.3	1074.8	1097.1	1119.3	1128.9
37.5°	1027.1	1036.6	1058.9	1087.5	1100.2
40°	982.6	995.3	1023.9	1062.1	1068.4
42.5°	941.2	957.1	982.6	1027.1	1043.0
45°	893.5	909.4	944.4	992.1	1017.6
47.5°	849.0	864.9	903.1	960.3	992.1
50°	795.0	817.2	864.9	931.7	963.5
52.5°	744.1	763.2	826.8	899.9	938.1
55°	690.0	712.3	788.6	868.1	909.4
57.5°	642.3	661.4	747.3	836.3	884.0
60°	581.9	607.4	705.9	801.3	849.0
62.5°	518.3	556.5	664.6	763.2	814.0
65°	457.9	502.4	626.4	725.0	775.9
67.5°	403.8	451.5	578.7	683.7	731.4
70°	340.2	400.7	531.0	632.8	686.9
72.5°	283.0	349.8	477.0	578.7	626.4
75°	225.8	298.9	422.9	508.8	537.4
77.5°	174.9	244.8	362.5	387.9	391.1
80°	130.4	194.0	270.3	273.5	283.0
82.5°	89.0	136.7	174.9	190.8	194.0
85°	57.2	79.5	98.6	101.8	108.1
87.5°	25.4	28.6	35.0	31.8	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)