

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: P390409

Luminaire Tested: **22CZ2-50VHE-HRP-UNV-L935-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: P390409
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: 22CZ2-50VHE-HRP-UNV-L935-CD1-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3611.2 lumens
Efficiency: N/A
Efficacy: 99.8 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

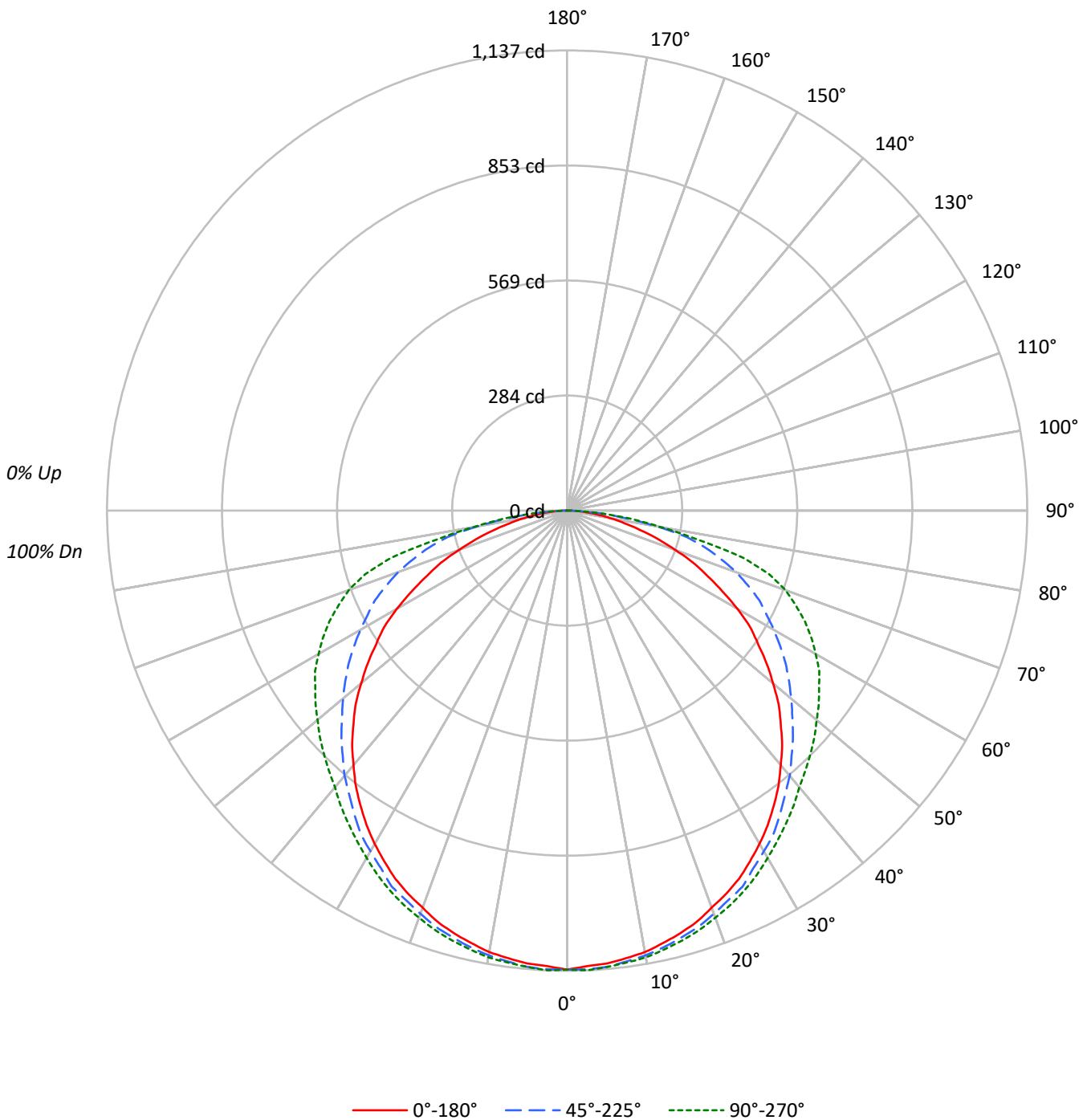
Input Watts (W): 36.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3052	3052	3052
5°	3035	3057	3057
10°	3027	3049	3063
15°	3012	3042	3064
20°	2990	3036	3066
25°	2982	3045	3076
30°	2955	3021	3079
35°	2923	3011	3098
40°	2884	3005	3136
45°	2841	3003	3235
50°	2780	3025	3370
55°	2705	3091	3565
60°	2616	3174	3817
65°	2436	3332	4127
70°	2236	3490	4515
75°	1961	3673	4668
80°	1688	3499	3663
85°	1476	2544	2788



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	3.0
10°-20°	308.1	8.5
20°-30°	470.0	13.0
30°-40°	573.9	15.9
40°-50°	613.7	17.0
50°-60°	592.3	16.4
60°-70°	509.9	14.1
70°-80°	345.0	9.6
80°-90°	91.0	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°	885.4	24.5
0°-40°	1459.3	40.4
0°-60°	2665.3	73.8
0°-90°	3611.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3611.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1124	1126	1132	1132	1132	107
15°	1081	1084	1092	1097	1100	305
25°	1004	1010	1025	1031	1036	462
35°	890	898	916	935	943	557
45°	746	760	789	829	850	576
55°	576	595	659	725	760	517
65°	382	420	523	606	648	380
75°	189	250	353	425	449	202
85°	48	66	82	85	90	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1134.3	1134.3	1134.3	1134.3	<i>1134.3</i>
2.5°	<i>1126.4</i>	<i>1129.0</i>	<i>1134.3</i>	<i>1134.3</i>	<i>1137.0</i>
5°	1123.7	1126.4	1131.7	1131.7	<i>1131.7</i>
7.5°	1115.7	1118.4	1123.7	1126.4	<i>1126.4</i>
10°	1107.8	1110.4	1115.7	1118.4	<i>1121.1</i>
12.5°	1094.5	1097.1	1105.1	1110.4	<i>1110.4</i>
15°	1081.2	1083.9	1091.8	1097.1	<i>1099.8</i>
17.5°	1065.3	1070.6	1078.6	1083.9	<i>1086.5</i>
20°	1044.0	1049.3	1060.0	1067.9	<i>1070.6</i>
22.5°	1025.4	1030.7	1041.4	1049.3	<i>1054.6</i>
25°	1004.2	1009.5	1025.4	1030.7	<i>1036.0</i>
27.5°	977.6	982.9	996.2	1006.8	<i>1014.8</i>
30°	951.0	956.4	972.3	985.6	<i>990.9</i>
32.5°	921.8	929.8	948.4	959.0	<i>967.0</i>
35°	889.9	897.9	916.5	935.1	<i>943.1</i>
37.5°	858.1	866.0	884.6	908.5	<i>919.2</i>
40°	820.9	831.5	855.4	887.3	<i>892.6</i>
42.5°	786.3	799.6	820.9	858.1	<i>871.3</i>
45°	746.5	759.8	789.0	828.8	<i>850.1</i>
47.5°	709.3	722.6	754.5	802.3	<i>828.8</i>
50°	664.1	682.7	722.6	778.4	<i>804.9</i>
52.5°	621.6	637.6	690.7	751.8	<i>783.7</i>
55°	576.5	595.1	658.8	725.2	<i>759.8</i>
57.5°	536.6	552.6	624.3	698.7	<i>738.5</i>
60°	486.1	507.4	589.8	669.4	<i>709.3</i>
62.5°	433.0	464.9	555.2	637.6	<i>680.1</i>
65°	382.5	419.7	523.3	605.7	<i>648.2</i>
67.5°	337.4	377.2	483.5	571.2	<i>611.0</i>
70°	284.2	334.7	443.6	528.7	<i>573.8</i>
72.5°	236.4	292.2	398.5	483.5	<i>523.3</i>
75°	188.6	249.7	353.3	425.0	<i>449.0</i>
77.5°	146.1	204.6	302.8	324.1	<i>326.8</i>
80°	108.9	162.0	225.8	228.5	<i>236.4</i>
82.5°	74.4	114.2	146.1	159.4	<i>162.0</i>
85°	47.8	66.4	82.4	85.0	<i>90.3</i>
87.5°	21.3	23.9	29.2	26.6	<i>26.6</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)