

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: P390407

Luminaire Tested: **22CZ2-50VHE-HRP-UNV-L930-CD1-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: P390407  
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-L930-CD1-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: 3568.2 lumens  
Efficiency: N/A  
Efficacy: 98.6 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

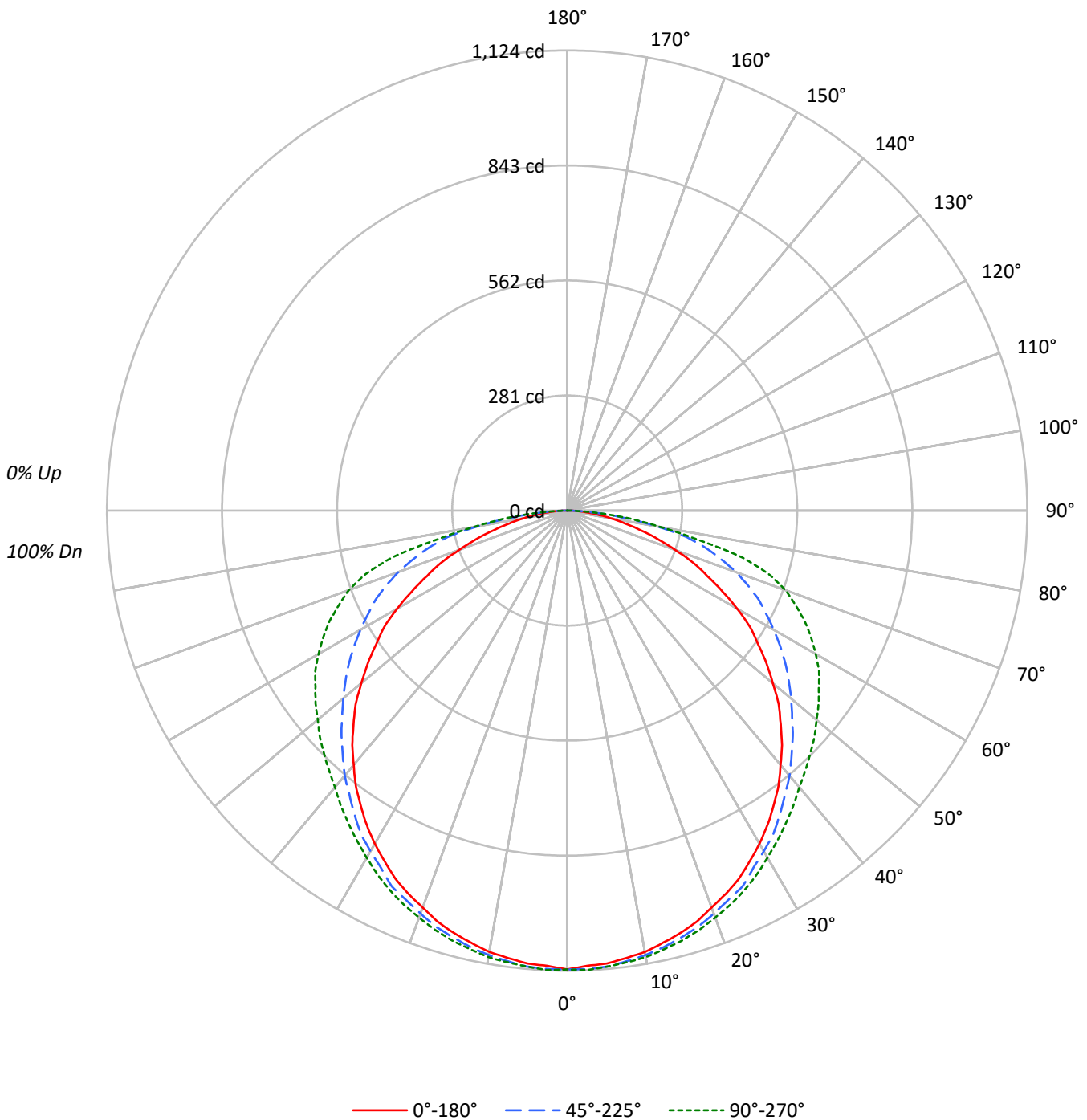
Input Watts (W): 36.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3016	3016	3016
5°	2999	3021	3021
10°	2991	3013	3027
15°	2976	3006	3027
20°	2954	2999	3029
25°	2946	3008	3040
30°	2920	2985	3042
35°	2889	2975	3061
40°	2849	2969	3098
45°	2807	2967	3197
50°	2747	2989	3330
55°	2672	3054	3522
60°	2585	3136	3772
65°	2407	3293	4078
70°	2210	3449	4461
75°	1938	3630	4612
80°	1667	3457	3620
85°	1457	2513	2754



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.0	3.0
10°-20°	304.4	8.5
20°-30°	464.5	13.0
30°-40°	567.1	15.9
40°-50°	606.4	17.0
50°-60°	585.3	16.4
60°-70°	503.8	14.1
70°-80°	340.9	9.6
80°-90°	89.9	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°	874.9	24.5
0°-40°	1442.0	40.4
0°-60°	2633.6	73.8
0°-90°	3568.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3568.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1121	1121	1121	1121	1121	
5°	1110	1113	1118	1118	1118	105
15°	1068	1071	1079	1084	1087	301
25°	992	998	1013	1018	1024	457
35°	879	887	906	924	932	550
45°	738	751	780	819	840	569
55°	570	588	651	717	751	510
65°	378	415	517	598	640	376
75°	186	247	349	420	444	200
85°	47	66	81	84	89	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1120.9	1120.9	1120.9	1120.9	1120.9
2.5°	1113.0	1115.6	1120.9	1120.9	1123.5
5°	1110.4	1113.0	1118.2	1118.2	1118.2
7.5°	1102.5	1105.1	1110.4	1113.0	1113.0
10°	1094.6	1097.2	1102.5	1105.1	1107.7
12.5°	1081.5	1084.1	1092.0	1097.2	1097.2
15°	1068.4	1071.0	1078.9	1084.1	1086.7
17.5°	1052.6	1057.9	1065.7	1071.0	1073.6
20°	1031.6	1036.9	1047.4	1055.2	1057.9
22.5°	1013.2	1018.5	1029.0	1036.9	1042.1
25°	992.2	997.5	1013.2	1018.5	1023.7
27.5°	966.0	971.2	984.4	994.9	1002.7
30°	939.7	945.0	960.7	973.9	979.1
32.5°	910.9	918.7	937.1	947.6	955.5
35°	879.4	887.2	905.6	924.0	931.9
37.5°	847.9	855.7	874.1	897.7	908.2
40°	811.1	821.6	845.2	876.7	882.0
42.5°	777.0	790.1	811.1	847.9	861.0
45°	737.6	750.7	779.6	819.0	840.0
47.5°	700.9	714.0	745.5	792.7	819.0
50°	656.2	674.6	714.0	769.1	795.4
52.5°	614.2	630.0	682.5	742.9	774.4
55°	569.6	588.0	651.0	716.6	750.7
57.5°	530.2	546.0	616.9	690.4	729.7
60°	480.4	501.4	582.7	661.5	700.9
62.5°	427.9	459.4	548.6	630.0	672.0
65°	378.0	414.7	517.1	598.5	640.5
67.5°	333.4	372.7	477.7	564.4	603.7
70°	280.9	330.7	438.4	522.4	567.0
72.5°	233.6	288.7	393.7	477.7	517.1
75°	186.4	246.7	349.1	420.0	443.6
77.5°	144.4	202.1	299.2	320.2	322.9
80°	107.6	160.1	223.1	225.7	233.6
82.5°	73.5	112.9	144.4	157.5	160.1
85°	47.2	65.6	81.4	84.0	89.2
87.5°	21.0	23.6	28.9	26.2	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)