

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: P388348

Luminaire Tested: **22CZ2-50VHE-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: P388348  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-50VHE-UNV-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4298.3 lumens  
Efficiency: N/A  
Efficacy: 118.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

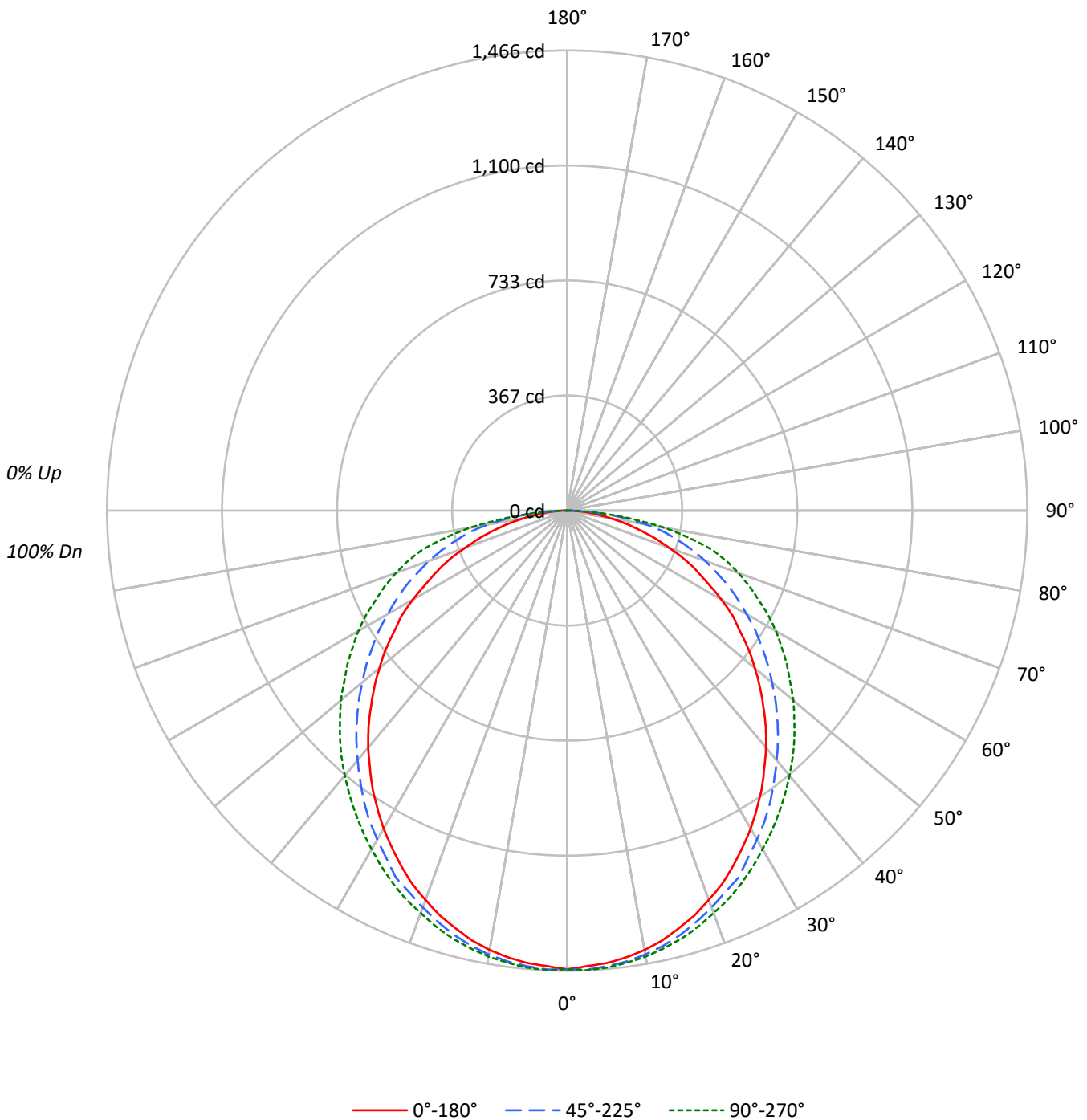
Input Watts (W): 36.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3933	3933	3933
5°	3908	3937	3948
10°	3884	3924	3942
15°	3836	3895	3930
20°	3779	3852	3907
25°	3711	3831	3893
30°	3634	3759	3871
35°	3551	3710	3863
40°	3462	3648	3871
45°	3365	3606	3896
50°	3268	3569	3940
55°	3156	3552	4009
60°	3062	3552	4132
65°	2909	3609	4283
70°	2713	3677	4559
75°	2485	3804	4926
80°	2163	3966	4850
85°	1893	3526	3853



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.2	3.2
10°-20°	393.7	9.2
20°-30°	591.0	13.7
30°-40°	706.2	16.4
40°-50°	734.3	17.1
50°-60°	680.6	15.8
60°-70°	558.3	13.0
70°-80°	377.4	8.8
80°-90°	118.6	2.8
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°	1122.9	26.1
0°-40°	1829.1	42.6
0°-60°	3244.1	75.5
0°-90°	4298.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4298.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1462	1462	1462	1462	1462	
5°	1447	1449	1457	1459	1462	137
15°	1377	1383	1398	1406	1411	388
25°	1250	1261	1290	1305	1311	576
35°	1081	1096	1129	1163	1176	676
45°	884	901	948	1002	1024	683
55°	673	694	757	825	854	604
65°	457	482	567	641	673	452
75°	239	279	366	440	474	253
85°	61	85	114	127	125	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1461.5	1461.5	1461.5	1461.5	1461.5
2.5°	1453.0	1457.3	1463.6	1465.7	1465.7
5°	1446.7	1448.8	1457.3	1459.4	1461.5
7.5°	1436.1	1440.4	1448.8	1450.9	1453.0
10°	1421.3	1425.5	1436.1	1440.4	1442.5
12.5°	1402.3	1406.5	1419.2	1425.5	1427.7
15°	1376.9	1383.2	1398.0	1406.5	1410.7
17.5°	1351.5	1357.9	1372.7	1385.4	1389.6
20°	1319.8	1334.6	1345.2	1362.1	1364.2
22.5°	1288.1	1296.5	1315.6	1332.5	1340.9
25°	1250.0	1260.6	1290.2	1305.0	1311.3
27.5°	1209.8	1224.6	1247.9	1271.1	1279.6
30°	1169.6	1180.2	1209.8	1237.3	1245.8
32.5°	1125.2	1140.0	1171.7	1199.2	1211.9
35°	1080.8	1095.6	1129.4	1163.3	1176.0
37.5°	1032.1	1049.1	1082.9	1123.1	1140.0
40°	985.6	998.3	1038.5	1087.1	1101.9
42.5°	937.0	951.8	994.1	1047.0	1063.9
45°	884.1	901.0	947.5	1002.5	1023.7
47.5°	833.3	850.3	901.0	956.0	981.4
50°	780.5	801.6	852.4	915.8	941.2
52.5°	729.7	748.7	805.8	871.4	894.7
55°	672.6	693.7	757.2	824.9	854.5
57.5°	626.1	640.9	710.7	780.5	810.1
60°	568.9	588.0	659.9	733.9	767.8
62.5°	507.6	539.3	613.4	689.5	723.3
65°	456.9	482.2	566.8	640.9	672.6
67.5°	404.0	431.5	514.0	592.2	628.2
70°	344.8	380.7	467.4	545.7	579.5
72.5°	291.9	329.9	418.8	494.9	530.9
75°	239.0	279.2	365.9	439.9	473.8
77.5°	188.2	232.7	317.3	374.4	395.5
80°	139.6	181.9	255.9	296.1	313.0
82.5°	97.3	133.2	188.2	209.4	213.6
85°	61.3	84.6	114.2	126.9	124.8
87.5°	27.5	33.8	42.3	46.5	44.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)