

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: P388040

Luminaire Tested: **22CZ2-44VHE-SQR-UNV-L940-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: P388040  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-44VHE-SQR-UNV-L940-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3790.2 lumens  
Efficiency: N/A  
Efficacy: 116.3 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

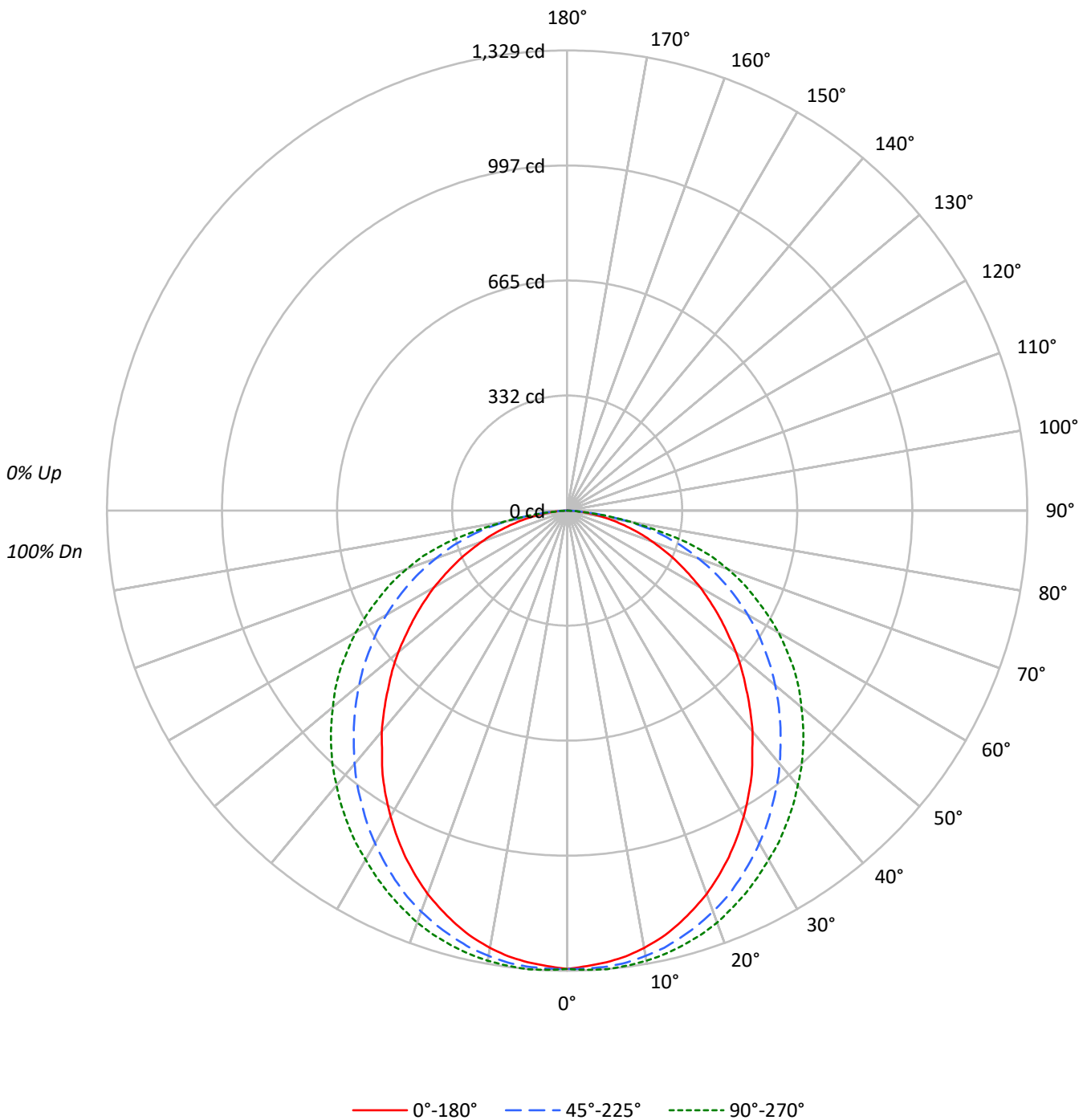
Input Watts (W): 32.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91		93	91	88		90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75		81	77	73		78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62		72	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		64	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

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

	0°	45°	90°
0°	3563	3563	3563
5°	3538	3572	3591
10°	3505	3569	3608
15°	3448	3553	3618
20°	3374	3529	3627
25°	3279	3493	3621
30°	3169	3449	3617
35°	3055	3398	3628
40°	2926	3355	3640
45°	2786	3314	3669
50°	2666	3283	3698
55°	2524	3258	3756
60°	2391	3243	3795
65°	2234	3219	3826
70°	2052	3171	3878
75°	1852	3086	3741
80°	1588	2732	2816
85°	1278	1612	1278



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.5	3.3
10°-20°	358.9	9.5
20°-30°	539.0	14.2
30°-40°	642.8	17.0
40°-50°	664.6	17.5
50°-60°	611.1	16.1
60°-70°	486.5	12.8
70°-80°	297.2	7.8
80°-90°	64.6	1.7
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°	1023.4	27.0
0°-40°	1666.2	44.0
0°-60°	2941.9	77.6
0°-90°	3790.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3790.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1310	1313	1322	1328	1329	124
15°	1238	1252	1275	1293	1299	349
25°	1104	1132	1176	1209	1220	508
35°	930	970	1034	1088	1104	580
45°	732	784	871	941	964	566
55°	538	597	694	774	800	481
65°	351	410	506	576	601	347
75°	178	230	297	349	360	190
85°	41	50	52	45	41	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1324.0	1324.0	1324.0	1324.0	1324.0
2.5°	1316.8	1318.6	1324.0	1327.6	1327.6
5°	1309.6	1313.2	1322.2	1327.6	1329.4
7.5°	1298.8	1304.2	1316.8	1324.0	1325.8
10°	1282.6	1289.8	1306.0	1316.8	1320.4
12.5°	1262.8	1273.6	1293.4	1307.8	1311.4
15°	1237.7	1252.1	1275.4	1293.4	1298.8
17.5°	1208.9	1226.9	1255.6	1277.2	1284.4
20°	1178.3	1196.3	1232.3	1257.4	1266.4
22.5°	1142.3	1165.7	1207.1	1235.9	1243.1
25°	1104.5	1131.5	1176.5	1208.9	1219.7
27.5°	1063.2	1095.5	1144.1	1183.7	1192.7
30°	1020.0	1054.2	1109.9	1153.1	1163.9
32.5°	975.0	1014.6	1074.0	1122.5	1136.9
35°	930.0	969.6	1034.4	1088.3	1104.5
37.5°	877.9	924.6	996.6	1052.4	1072.2
40°	832.9	877.9	955.2	1016.4	1036.2
42.5°	782.5	831.1	912.1	978.6	1002.0
45°	732.2	784.3	870.7	940.8	964.2
47.5°	685.4	737.6	827.5	901.3	924.6
50°	636.8	690.8	784.3	859.9	883.3
52.5°	584.7	644.0	741.2	816.7	843.7
55°	537.9	597.2	694.4	773.5	800.5
57.5°	489.3	550.5	651.2	726.8	752.0
60°	444.3	503.7	602.6	676.4	705.2
62.5°	395.8	456.9	554.1	626.0	653.0
65°	350.8	410.2	505.5	575.7	600.8
67.5°	305.8	365.2	455.1	521.7	550.5
70°	260.8	320.2	403.0	467.7	492.9
72.5°	221.3	273.4	352.6	412.0	435.3
75°	178.1	230.3	296.8	349.0	359.8
77.5°	138.5	185.3	241.1	264.4	268.0
80°	102.5	138.5	176.3	181.7	181.7
82.5°	68.4	95.3	109.7	111.5	109.7
85°	41.4	50.4	52.2	45.0	41.4
87.5°	14.4	14.4	9.0	5.4	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)