

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: P389519

Luminaire Tested: **24CZ2-100VHE-S-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: P389519  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-100VHE-S-UNV-L930-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8834.9 lumens  
Efficiency: N/A  
Efficacy: 126.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

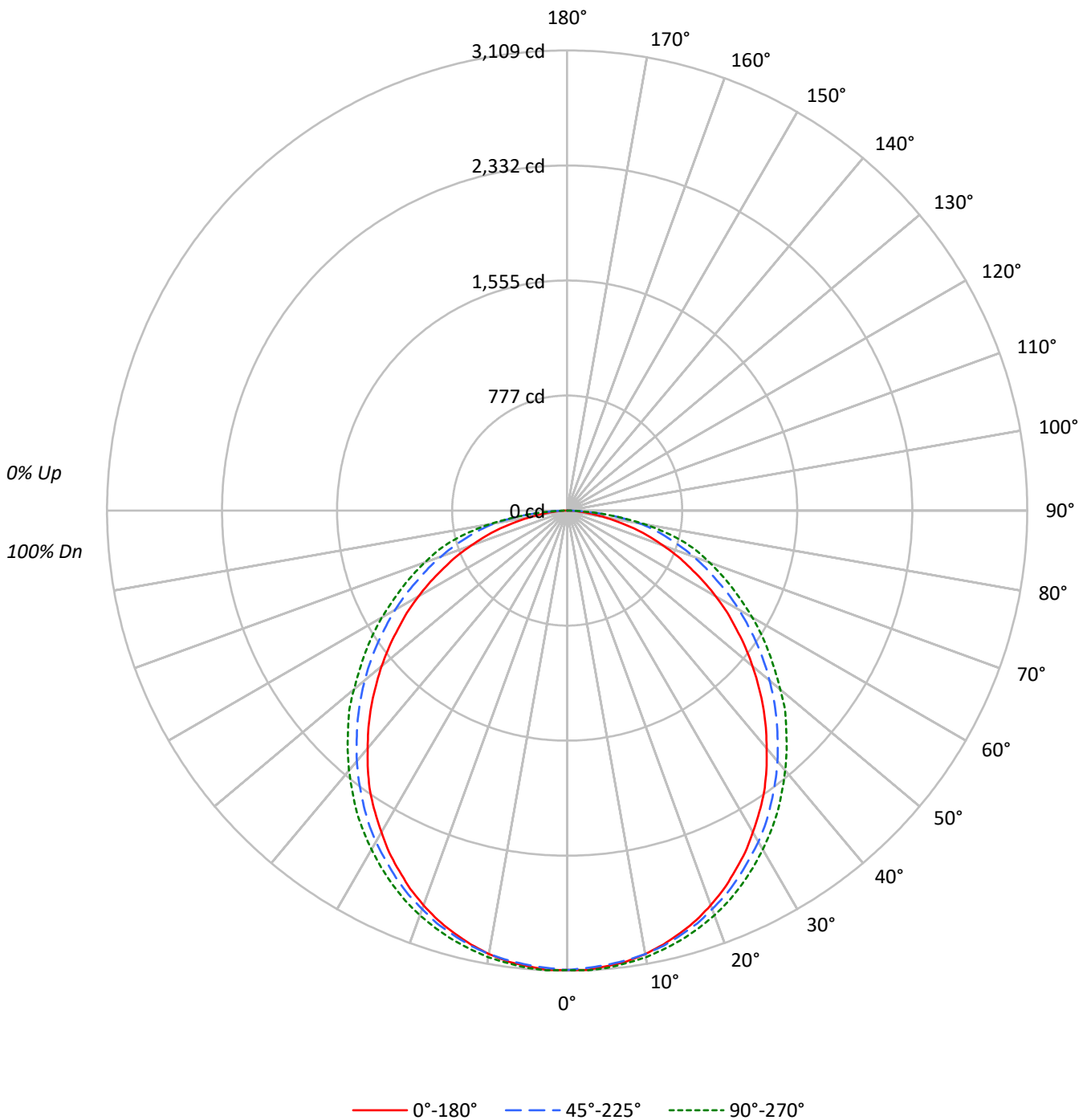
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	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°	4176	4176	4176
5°	4173	4162	4188
10°	4156	4156	4187
15°	4116	4136	4179
20°	4062	4103	4167
25°	3987	4062	4141
30°	3898	4016	4107
35°	3812	3950	4075
40°	3682	3884	4027
45°	3562	3807	3984
50°	3425	3736	3936
55°	3272	3667	3897
60°	3119	3610	3889
65°	2922	3547	3913
70°	2705	3566	4019
75°	2421	3633	4245
80°	1957	3849	4153
85°	1473	3379	3293



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	293.8	3.3
10°-20°	839.6	9.5
20°-30°	1262.1	14.3
30°-40°	1503.4	17.0
40°-50°	1538.6	17.4
50°-60°	1385.2	15.7
60°-70°	1087.8	12.3
70°-80°	706.0	8.0
80°-90°	218.4	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°	2395.5	27.1
0°-40°	3898.9	44.1
0°-60°	6822.7	77.2
0°-90°	8834.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8834.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3104	3104	3104	3104	3104	
5°	3090	3095	3081	3098	3101	294
15°	2955	2963	2969	2994	3000	833
25°	2686	2708	2736	2781	2790	1237
35°	2321	2349	2405	2464	2481	1448
45°	1872	1917	2001	2077	2094	1443
55°	1395	1456	1563	1644	1661	1250
65°	918	988	1114	1207	1229	913
75°	466	556	699	794	817	493
85°	95	177	219	213	213	115
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3103.8	3103.8	3103.8	3103.8	3103.8
2.5°	3106.6	3106.6	3092.5	3106.6	3109.4
5°	3089.7	3095.3	3081.3	3098.1	3101.0
7.5°	3072.9	3072.9	3064.5	3081.3	3084.1
10°	3042.0	3044.8	3042.0	3061.7	3064.5
12.5°	3002.7	3008.3	3011.2	3030.8	3033.6
15°	2955.0	2963.4	2969.1	2994.3	2999.9
17.5°	2901.7	2910.1	2924.2	2952.2	2957.8
20°	2837.2	2848.4	2865.2	2901.7	2910.1
22.5°	2767.0	2778.2	2806.3	2840.0	2854.0
25°	2685.6	2708.1	2736.1	2781.0	2789.5
27.5°	2604.2	2623.9	2660.4	2708.1	2719.3
30°	2508.8	2539.7	2584.6	2632.3	2643.5
32.5°	2416.2	2447.1	2500.4	2550.9	2565.0
35°	2320.8	2348.9	2405.0	2463.9	2480.8
37.5°	2211.4	2247.8	2309.6	2368.5	2385.3
40°	2096.3	2141.2	2211.4	2273.1	2292.7
42.5°	1986.9	2034.6	2104.7	2172.1	2194.5
45°	1871.8	1916.7	2000.9	2076.7	2093.5
47.5°	1753.9	1804.4	1894.2	1970.0	1998.1
50°	1636.1	1689.4	1784.8	1863.4	1880.2
52.5°	1518.2	1574.3	1675.4	1759.5	1768.0
55°	1394.7	1456.5	1563.1	1644.5	1661.3
57.5°	1282.5	1335.8	1450.9	1535.0	1554.7
60°	1159.0	1217.9	1341.4	1420.0	1445.2
62.5°	1041.1	1102.9	1232.0	1310.5	1333.0
65°	917.7	987.8	1114.1	1206.7	1229.2
67.5°	811.0	878.4	1013.1	1102.9	1125.3
70°	687.5	763.3	906.4	999.0	1021.5
72.5°	580.9	659.5	802.6	892.4	926.1
75°	465.8	555.6	698.8	794.2	816.6
77.5°	353.6	457.4	603.4	676.3	676.3
80°	252.6	362.0	496.7	530.4	536.0
82.5°	165.6	272.2	367.6	364.8	364.8
85°	95.4	176.8	218.9	213.3	213.3
87.5°	36.5	73.0	78.6	78.6	75.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)