

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: P388581

Luminaire Tested: **24CZ2-100VHE-UNV-L930-CD1-SDWPD1-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: P388581  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-100VHE-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8203.8 lumens  
Efficiency: N/A  
Efficacy: 117.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

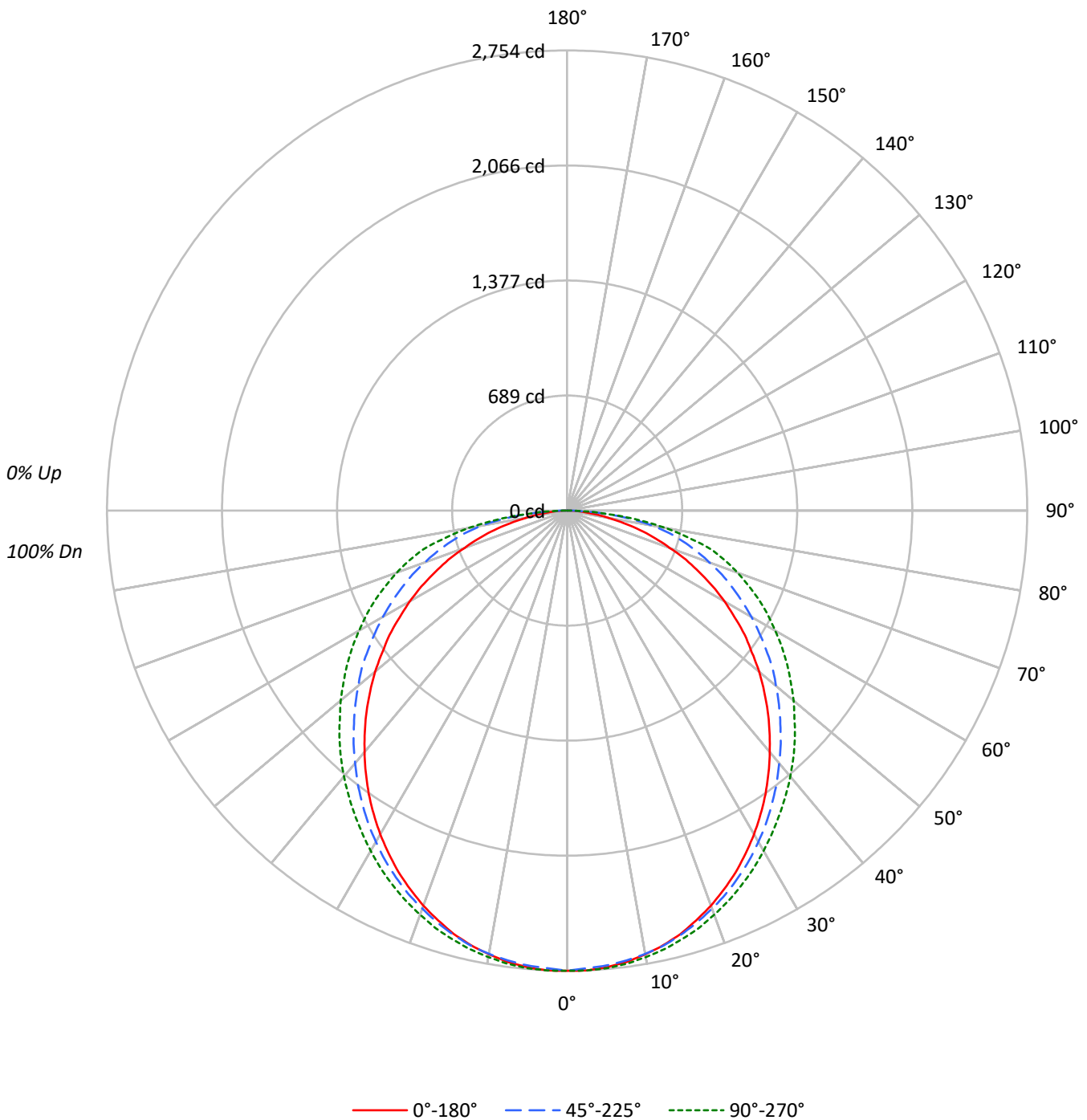
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	3706	3706	3706
5°	3705	3691	3713
10°	3685	3681	3707
15°	3654	3661	3699
20°	3603	3630	3685
25°	3544	3597	3670
30°	3475	3556	3654
35°	3400	3512	3643
40°	3313	3467	3650
45°	3230	3433	3668
50°	3141	3416	3702
55°	3044	3411	3770
60°	2925	3426	3868
65°	2772	3478	4036
70°	2574	3565	4265
75°	2349	3743	4626
80°	1931	4031	4625
85°	1479	3719	3974



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	260.5	3.2
10°-20°	743.7	9.1
20°-30°	1119.2	13.6
30°-40°	1341.2	16.3
40°-50°	1397.7	17.0
50°-60°	1300.4	15.9
60°-70°	1071.0	13.1
70°-80°	729.4	8.9
80°-90°	240.8	2.9
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°	2123.4	25.9
0°-40°	3464.6	42.2
0°-60°	6162.6	75.1
0°-90°	8203.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8203.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2754	2754	2754	2754	2754	
5°	2743	2743	2732	2746	2749	260
15°	2623	2626	2628	2653	2656	739
25°	2388	2398	2423	2464	2472	1099
35°	2070	2094	2138	2196	2218	1294
45°	1698	1733	1804	1895	1928	1309
55°	1298	1342	1454	1569	1607	1157
65°	871	945	1092	1221	1268	864
75°	452	553	720	849	890	476
85°	96	186	241	257	257	119
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2754.4	2754.4	2754.4	2754.4	2754.4
2.5°	2754.4	2754.4	2740.7	2754.4	2754.4
5°	2743.4	2743.4	2732.5	2746.2	2748.9
7.5°	2724.3	2727.0	2716.1	2732.5	2735.2
10°	2696.9	2699.6	2694.2	2710.6	2713.3
12.5°	2664.0	2666.8	2666.8	2685.9	2688.7
15°	2623.0	2625.7	2628.5	2653.1	2655.8
17.5°	2571.0	2579.2	2584.6	2614.8	2620.2
20°	2516.2	2524.4	2535.4	2568.2	2573.7
22.5°	2453.2	2464.2	2483.3	2518.9	2527.1
25°	2387.5	2398.5	2423.1	2464.2	2472.4
27.5°	2313.6	2330.0	2360.1	2403.9	2414.9
30°	2236.9	2253.3	2288.9	2335.5	2351.9
32.5°	2154.8	2176.7	2217.8	2269.8	2286.2
35°	2069.9	2094.5	2138.4	2195.9	2217.8
37.5°	1979.6	2006.9	2059.0	2121.9	2149.3
40°	1886.5	1919.3	1974.1	2048.0	2078.1
42.5°	1793.4	1823.5	1891.9	1971.3	2004.2
45°	1697.5	1733.1	1804.3	1894.7	1927.5
47.5°	1599.0	1634.6	1719.4	1815.3	1845.4
50°	1500.4	1536.0	1631.8	1733.1	1768.7
52.5°	1393.6	1440.2	1549.7	1651.0	1686.6
55°	1297.8	1341.6	1453.9	1568.9	1607.2
57.5°	1188.3	1240.3	1363.5	1484.0	1525.0
60°	1087.0	1141.7	1273.2	1396.4	1437.4
62.5°	982.9	1043.2	1182.8	1308.7	1355.3
65°	870.7	944.6	1092.4	1221.1	1267.7
67.5°	769.4	846.0	1002.1	1133.5	1174.6
70°	654.4	747.5	906.3	1037.7	1084.2
72.5°	555.8	648.9	815.9	944.6	991.1
75°	451.8	553.1	720.1	848.8	889.8
77.5°	347.7	460.0	627.0	725.6	739.3
80°	249.2	366.9	520.2	577.7	596.9
82.5°	175.2	282.0	383.3	421.6	432.6
85°	95.8	186.2	240.9	257.4	257.4
87.5°	41.1	79.4	95.8	98.6	101.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)