

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: P388582

Luminaire Tested: **24CZ2-100VHE-UNV-L930-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: P388582  
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-SWPD1-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: 8304.0 lumens  
Efficiency: N/A  
Efficacy: 119.3 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

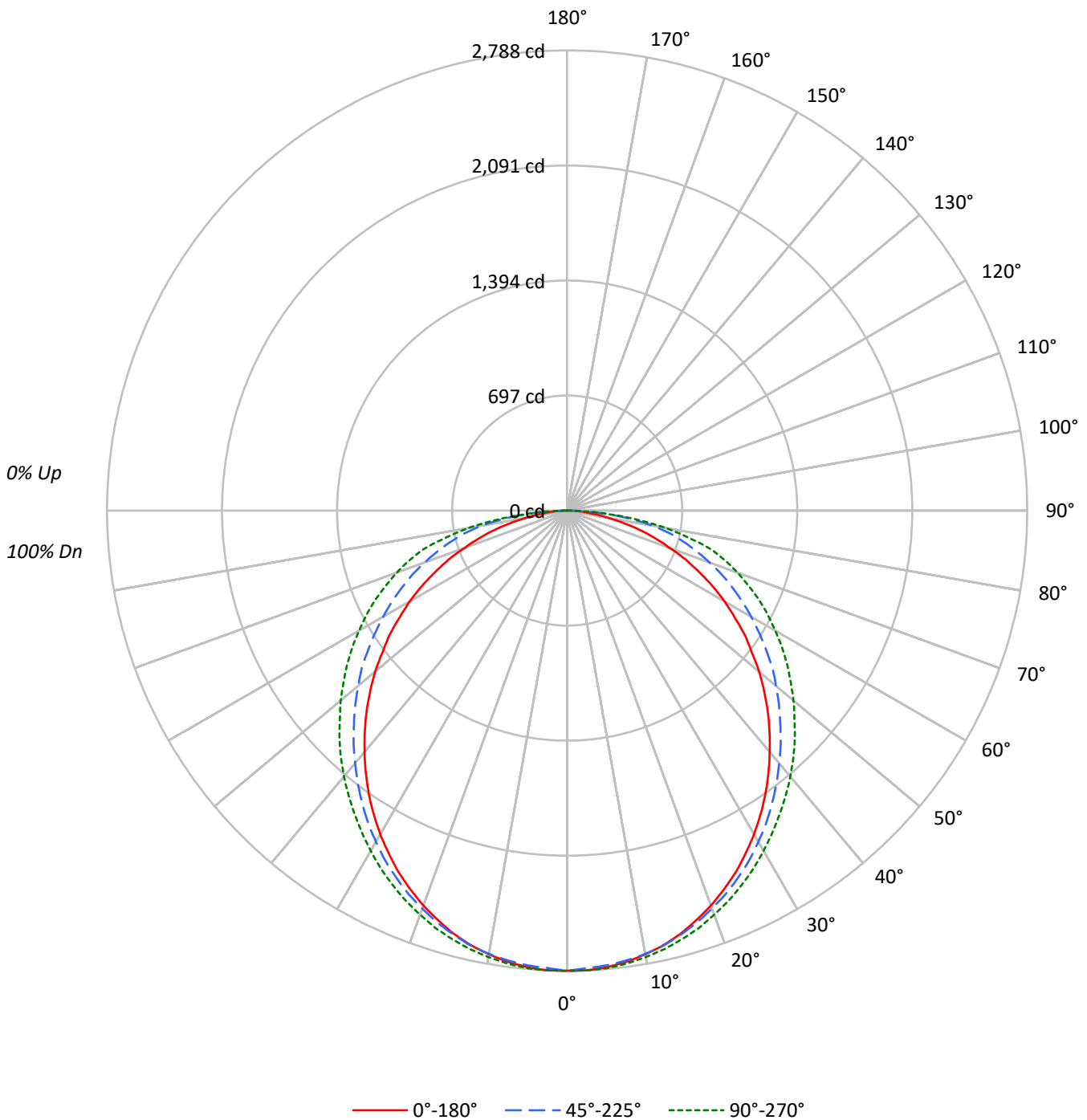
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3751	3751	3751
5°	3751	3736	3758
10°	3730	3726	3752
15°	3698	3706	3745
20°	3647	3675	3730
25°	3588	3641	3715
30°	3518	3600	3699
35°	3441	3555	3687
40°	3354	3510	3695
45°	3270	3475	3713
50°	3179	3458	3747
55°	3081	3452	3816
60°	2961	3468	3915
65°	2806	3521	4085
70°	2606	3609	4318
75°	2377	3789	4682
80°	1954	4080	4682
85°	1497	3765	4022



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	263.7	3.2
10°-20°	752.8	9.1
20°-30°	1132.8	13.6
30°-40°	1357.6	16.3
40°-50°	1414.7	17.0
50°-60°	1316.2	15.9
60°-70°	1084.1	13.1
70°-80°	738.3	8.9
80°-90°	243.8	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°	2149.3	25.9
0°-40°	3506.9	42.2
0°-60°	6237.8	75.1
0°-90°	8304.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8304.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2788	2788	2788	2788	2788	
5°	2777	2777	2766	2780	2782	264
15°	2655	2658	2661	2686	2688	748
25°	2417	2428	2453	2494	2503	1113
35°	2095	2120	2164	2223	2245	1310
45°	1718	1754	1826	1918	1951	1325
55°	1314	1358	1472	1588	1627	1171
65°	881	956	1106	1236	1283	875
75°	457	560	729	859	901	482
85°	97	188	244	260	260	120
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2788.0	2788.0	2788.0	2788.0	2788.0
2.5°	2788.0	2788.0	2774.2	2788.0	2788.0
5°	2777.0	2777.0	2765.9	2779.7	2782.5
7.5°	2757.6	2760.3	2749.2	2765.9	2768.6
10°	2729.8	2732.6	2727.1	2743.7	2746.5
12.5°	2696.6	2699.4	2699.4	2718.8	2721.5
15°	2655.0	2657.8	2660.6	2685.5	2688.3
17.5°	2602.4	2610.7	2616.2	2646.7	2652.2
20°	2546.9	2555.2	2566.3	2599.6	2605.1
22.5°	2483.2	2494.3	2513.7	2549.7	2558.0
25°	2416.7	2427.8	2452.7	2494.3	2502.6
27.5°	2341.8	2358.5	2389.0	2433.3	2444.4
30°	2264.2	2280.9	2316.9	2364.0	2380.6
32.5°	2181.1	2203.3	2244.8	2297.5	2314.1
35°	2095.2	2120.1	2164.5	2222.7	2244.8
37.5°	2003.7	2031.4	2084.1	2147.8	2175.6
40°	1909.5	1942.8	1998.2	2073.0	2103.5
42.5°	1815.3	1845.8	1915.0	1995.4	2028.7
45°	1718.3	1754.3	1826.4	1917.8	1951.1
47.5°	1618.5	1654.5	1740.4	1837.4	1867.9
50°	1518.7	1554.8	1651.8	1754.3	1790.3
52.5°	1410.6	1457.8	1568.6	1671.2	1707.2
55°	1313.6	1358.0	1471.6	1588.0	1626.8
57.5°	1202.8	1255.4	1380.2	1502.1	1543.7
60°	1100.2	1155.7	1288.7	1413.4	1455.0
62.5°	994.9	1055.9	1197.2	1324.7	1371.8
65°	881.3	956.1	1105.8	1236.0	1283.2
67.5°	778.8	856.4	1014.3	1147.4	1188.9
70°	662.4	756.6	917.3	1050.4	1097.5
72.5°	562.6	656.8	825.9	956.1	1003.3
75°	457.3	559.8	728.9	859.1	900.7
77.5°	352.0	465.6	634.7	734.4	748.3
80°	252.2	371.4	526.6	584.8	604.2
82.5°	177.4	285.5	388.0	426.8	437.9
85°	97.0	188.5	243.9	260.5	260.5
87.5°	41.6	80.4	97.0	99.8	102.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)