

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: P388303

Luminaire Tested: **24CZ2-100VHE-SQR-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: P388303  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-100VHE-SQR-UNV-L940-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

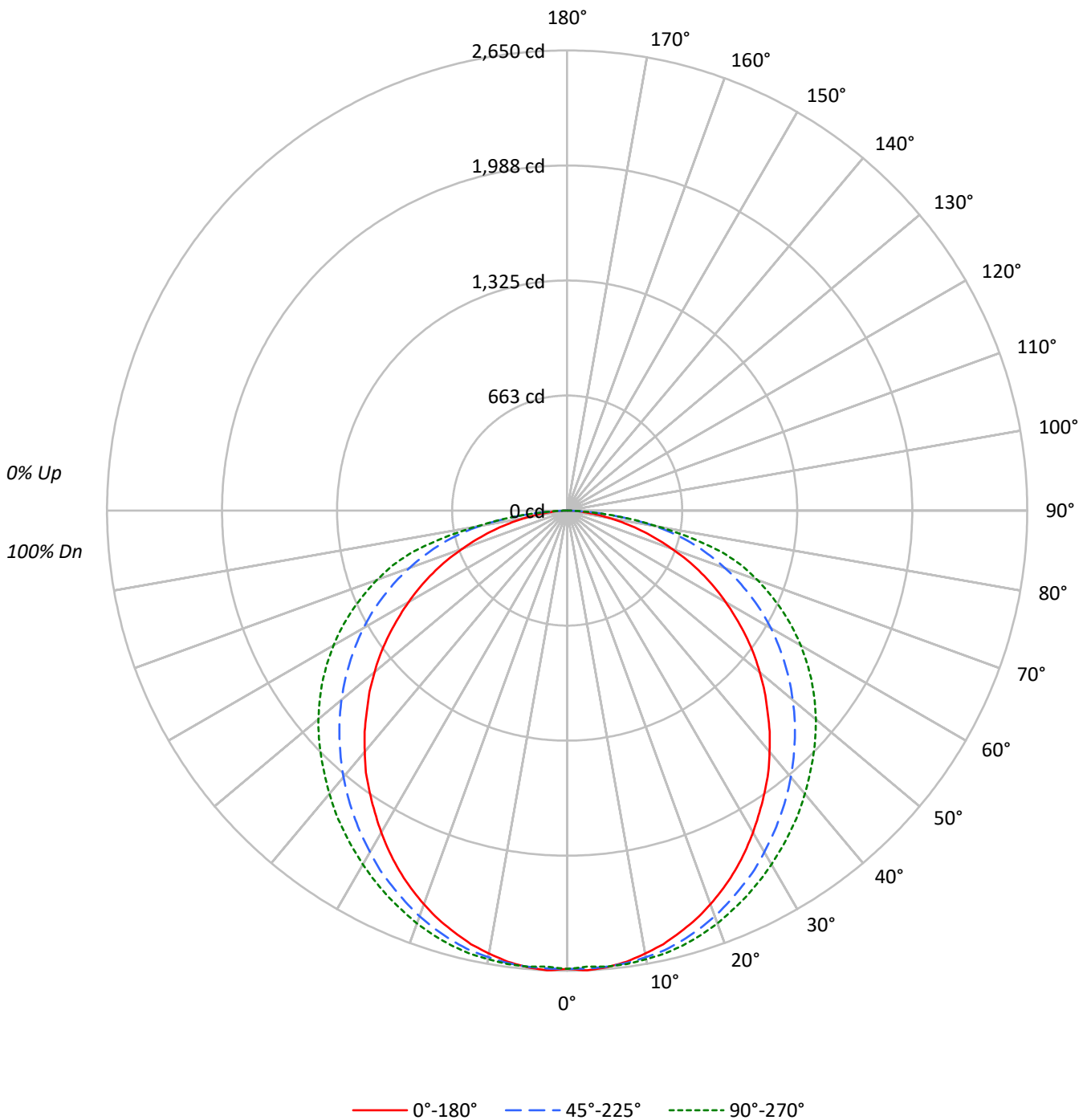
Lumens per Lamp: N/A  
Luminaire Lumens: 8256.8 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

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

	0°	45°	90°
0°	3551	3551	3551
5°	3565	3561	3561
10°	3539	3569	3584
15°	3502	3570	3608
20°	3455	3560	3623
25°	3396	3542	3635
30°	3325	3529	3656
35°	3256	3520	3690
40°	3185	3520	3740
45°	3103	3528	3813
50°	3031	3550	3915
55°	2942	3588	4036
60°	2840	3647	4182
65°	2717	3715	4358
70°	2520	3808	4580
75°	2282	3941	4791
80°	1922	3951	4120
85°	1473	2989	2989



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	250.5	3.0
10°-20°	720.8	8.7
20°-30°	1094.8	13.3
30°-40°	1331.7	16.1
40°-50°	1417.9	17.2
50°-60°	1350.4	16.4
60°-70°	1129.3	13.7
70°-80°	753.0	9.1
80°-90°	208.3	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°	2066.2	25.0
0°-40°	3397.9	41.2
0°-60°	6166.2	74.7
0°-90°	8256.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8256.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2639	2639	2639	2639	2639	
5°	2639	2623	2636	2636	2636	250
15°	2514	2519	2563	2582	2590	709
25°	2288	2318	2386	2427	2448	1053
35°	1982	2039	2143	2214	2247	1240
45°	1630	1718	1854	1958	2004	1260
55°	1254	1363	1530	1663	1720	1121
65°	853	979	1167	1312	1369	843
75°	439	578	758	886	922	465
85°	95	177	194	191	194	115
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2639.3	2639.3	2639.3	2639.3	2639.3
2.5°	2650.2	2631.1	2639.3	2639.3	2628.4
5°	2639.3	2622.9	2636.5	2636.5	2636.5
7.5°	2620.2	2606.6	2628.4	2633.8	2633.8
10°	2590.2	2584.7	2612.0	2620.2	2622.9
12.5°	2557.5	2554.8	2592.9	2603.8	2612.0
15°	2513.9	2519.3	2562.9	2582.0	2590.2
17.5°	2467.5	2478.4	2527.5	2554.8	2562.9
20°	2413.0	2429.3	2486.6	2513.9	2530.2
22.5°	2353.0	2377.5	2437.5	2470.2	2489.3
25°	2287.6	2317.5	2385.7	2426.6	2448.4
27.5°	2216.7	2254.8	2333.9	2380.3	2402.1
30°	2140.3	2183.9	2271.2	2325.7	2353.0
32.5°	2061.3	2113.1	2208.5	2268.5	2301.2
35°	1982.2	2039.4	2143.0	2213.9	2246.7
37.5°	1903.1	1960.4	2074.9	2151.2	2192.1
40°	1813.1	1881.3	2004.0	2088.5	2129.4
42.5°	1725.9	1799.5	1930.4	2023.1	2066.7
45°	1630.5	1717.7	1854.0	1957.6	2004.0
47.5°	1543.2	1630.5	1777.7	1886.8	1938.6
50°	1447.8	1540.5	1695.9	1815.9	1870.4
52.5°	1355.1	1450.5	1614.1	1742.2	1796.8
55°	1254.2	1363.3	1529.6	1663.2	1720.4
57.5°	1153.3	1270.6	1442.3	1581.4	1638.6
60°	1055.2	1175.1	1355.1	1494.1	1554.1
62.5°	957.0	1077.0	1265.1	1406.9	1464.1
65°	853.4	978.8	1167.0	1311.5	1368.7
67.5°	749.8	880.7	1068.8	1213.3	1267.8
70°	640.7	779.8	967.9	1109.7	1164.2
72.5°	539.9	678.9	864.3	1003.4	1055.2
75°	439.0	578.0	758.0	886.1	921.6
77.5°	340.8	479.9	640.7	725.3	733.4
80°	248.1	379.0	509.9	534.4	531.7
82.5°	166.3	283.6	351.7	354.4	362.6
85°	95.4	177.2	193.6	190.9	193.6
87.5°	38.2	62.7	54.5	40.9	40.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)