

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: P388941

Luminaire Tested: **24CZ2-70VHE-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: P388941
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: 24CZ2-70VHE-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: 5682.6 lumens
Efficiency: N/A
Efficacy: 124.3 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

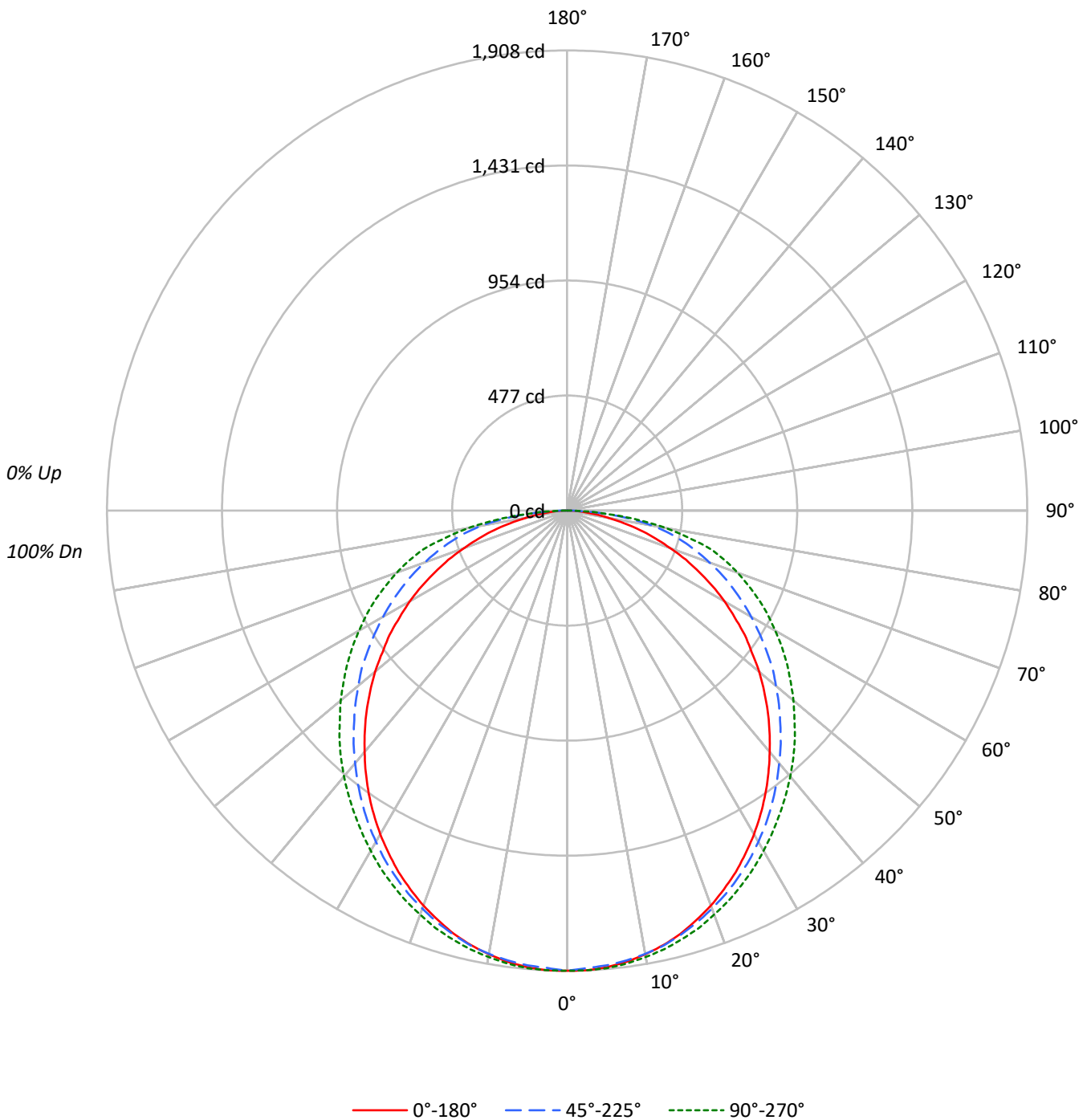
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2567	2567	2567
5°	2567	2556	2572
10°	2552	2550	2568
15°	2531	2536	2562
20°	2496	2515	2553
25°	2455	2492	2542
30°	2407	2463	2531
35°	2355	2433	2523
40°	2295	2402	2528
45°	2238	2378	2541
50°	2175	2366	2565
55°	2109	2362	2612
60°	2026	2373	2679
65°	1920	2409	2796
70°	1783	2470	2954
75°	1627	2593	3204
80°	1337	2792	3203
85°	1025	2577	2753



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.4	3.2
10°-20°	515.1	9.1
20°-30°	775.2	13.6
30°-40°	929.0	16.3
40°-50°	968.1	17.0
50°-60°	900.7	15.9
60°-70°	741.9	13.1
70°-80°	505.2	8.9
80°-90°	166.8	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°	1470.8	25.9
0°-40°	2399.8	42.2
0°-60°	4268.7	75.1
0°-90°	5682.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5682.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1908	1908	1908	1908	1908	
5°	1900	1900	1893	1902	1904	180
15°	1817	1819	1821	1838	1840	512
25°	1654	1661	1678	1707	1713	761
35°	1434	1451	1481	1521	1536	896
45°	1176	1200	1250	1312	1335	907
55°	899	929	1007	1087	1113	801
65°	603	654	757	846	878	599
75°	313	383	499	588	616	330
85°	66	129	167	178	178	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1907.9	1907.9	1907.9	1907.9	1907.9
2.5°	1907.9	1907.9	1898.4	1907.9	1907.9
5°	1900.3	1900.3	1892.7	1902.2	1904.1
7.5°	1887.1	1888.9	1881.4	1892.7	1894.6
10°	1868.1	1870.0	1866.2	1877.6	1879.5
12.5°	1845.3	1847.2	1847.2	1860.5	1862.4
15°	1816.9	1818.8	1820.7	1837.7	1839.6
17.5°	1780.8	1786.5	1790.3	1811.2	1815.0
20°	1742.9	1748.6	1756.2	1778.9	1782.7
22.5°	1699.3	1706.9	1720.2	1744.8	1750.5
25°	1653.8	1661.4	1678.4	1706.9	1712.6
27.5°	1602.6	1614.0	1634.8	1665.2	1672.7
30°	1549.5	1560.8	1585.5	1617.7	1629.1
32.5°	1492.6	1507.7	1536.2	1572.2	1583.6
35°	1433.8	1450.8	1481.2	1521.0	1536.2
37.5°	1371.2	1390.2	1426.2	1469.8	1488.8
40°	1306.7	1329.5	1367.4	1418.6	1439.5
42.5°	1242.2	1263.1	1310.5	1365.5	1388.3
45°	1175.9	1200.5	1249.8	1312.4	1335.2
47.5°	1107.6	1132.2	1191.0	1257.4	1278.3
50°	1039.3	1064.0	1130.3	1200.5	1225.2
52.5°	965.3	997.6	1073.4	1143.6	1168.3
55°	899.0	929.3	1007.1	1086.7	1113.3
57.5°	823.1	859.1	944.5	1027.9	1056.4
60°	752.9	790.9	881.9	967.2	995.7
62.5°	680.9	722.6	819.3	906.5	938.8
65°	603.1	654.3	756.7	845.9	878.1
67.5°	532.9	586.0	694.1	785.2	813.6
70°	453.3	517.8	627.8	718.8	751.0
72.5°	385.0	449.5	565.2	654.3	686.5
75°	312.9	383.1	498.8	587.9	616.4
77.5°	240.9	318.6	434.3	502.6	512.1
80°	172.6	254.1	360.3	400.2	413.4
82.5°	121.4	195.3	265.5	292.1	299.7
85°	66.4	129.0	166.9	178.3	178.3
87.5°	28.4	55.0	66.4	68.3	70.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)