

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: P389878

Luminaire Tested: **24CZ2-70VHE-S-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: P389878
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: 24CZ2-70VHE-S-UNV-L930-CD1-SWPD1-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: 6043.7 lumens
Efficiency: N/A
Efficacy: 132.2 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

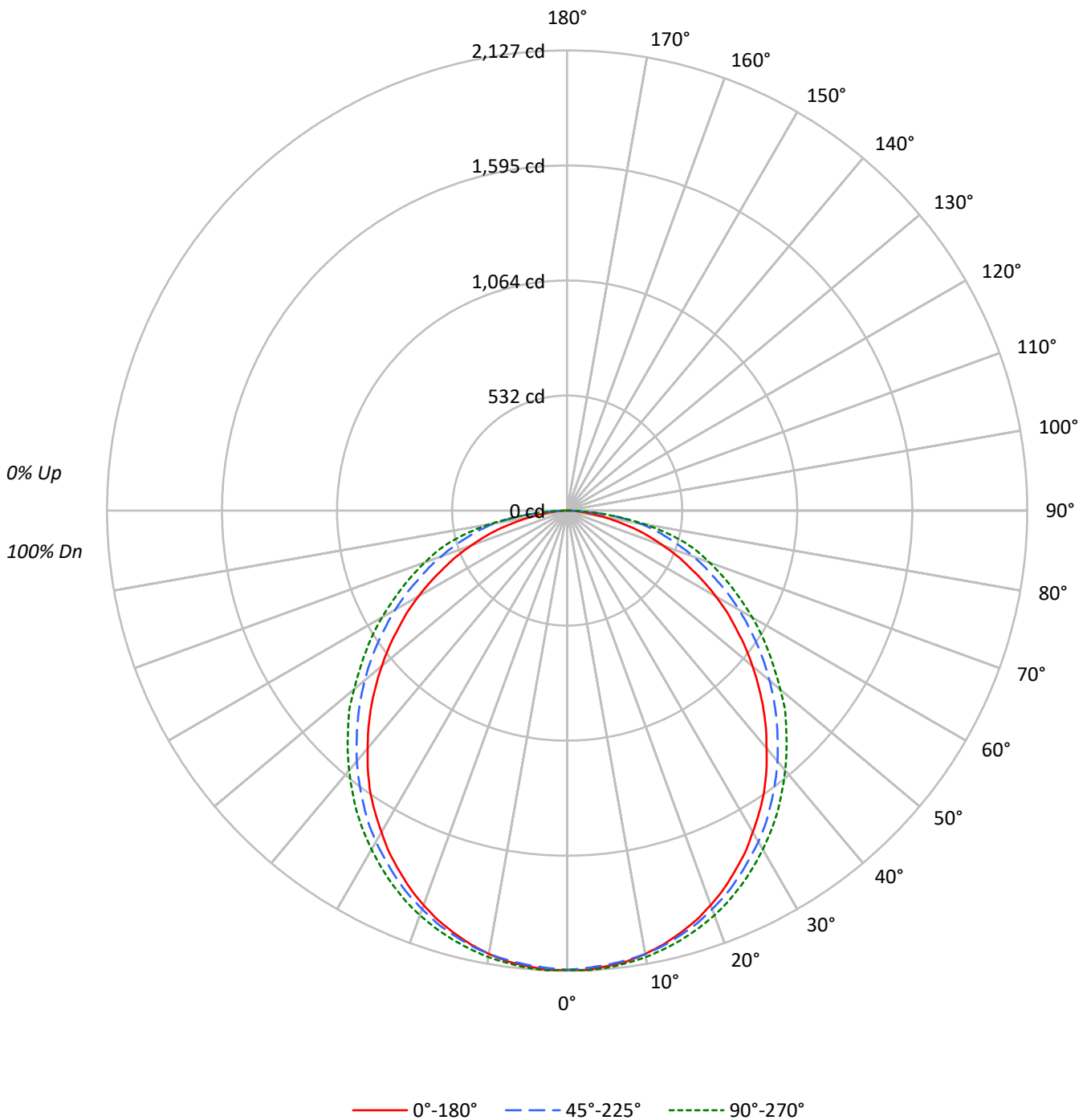
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2857	2857	2857
5°	2855	2847	2865
10°	2843	2843	2864
15°	2816	2829	2859
20°	2779	2806	2850
25°	2727	2779	2833
30°	2666	2747	2810
35°	2608	2702	2787
40°	2519	2657	2755
45°	2436	2604	2725
50°	2343	2556	2692
55°	2238	2508	2666
60°	2133	2469	2660
65°	1998	2426	2677
70°	1850	2439	2749
75°	1657	2485	2904
80°	1339	2633	2841
85°	1008	2311	2252



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.0	3.3
10°-20°	574.3	9.5
20°-30°	863.4	14.3
30°-40°	1028.4	17.0
40°-50°	1052.5	17.4
50°-60°	947.6	15.7
60°-70°	744.1	12.3
70°-80°	483.0	8.0
80°-90°	149.4	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°	1638.7	27.1
0°-40°	2667.1	44.1
0°-60°	4667.2	77.2
0°-90°	6043.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6043.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2123	2123	2123	2123	2123	
5°	2114	2117	2108	2119	2121	201
15°	2021	2027	2031	2048	2052	570
25°	1837	1852	1872	1902	1908	846
35°	1588	1607	1645	1686	1697	990
45°	1280	1311	1369	1421	1432	987
55°	954	996	1069	1125	1136	855
65°	628	676	762	826	841	625
75°	319	380	478	543	559	337
85°	65	121	150	146	146	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2123.2	2123.2	2123.2	2123.2	2123.2
2.5°	2125.1	2125.1	2115.5	2125.1	2127.0
5°	2113.6	2117.4	2107.8	2119.4	2121.3
7.5°	2102.1	2102.1	2096.3	2107.8	2109.8
10°	2081.0	2082.9	2081.0	2094.4	2096.3
12.5°	2054.1	2057.9	2059.8	2073.3	2075.2
15°	2021.4	2027.2	2031.0	2048.3	2052.2
17.5°	1985.0	1990.7	2000.3	2019.5	2023.4
20°	1940.8	1948.5	1960.0	1985.0	1990.7
22.5°	1892.8	1900.5	1919.7	1942.7	1952.3
25°	1837.2	1852.5	1871.7	1902.4	1908.2
27.5°	1781.5	1794.9	1819.9	1852.5	1860.2
30°	1716.2	1737.3	1768.0	1800.7	1808.4
32.5°	1652.9	1674.0	1710.5	1745.0	1754.6
35°	1587.6	1606.8	1645.2	1685.5	1697.0
37.5°	1512.7	1537.7	1579.9	1620.2	1631.7
40°	1434.0	1464.7	1512.7	1555.0	1568.4
42.5°	1359.1	1391.8	1439.8	1485.8	1501.2
45°	1280.4	1311.2	1368.7	1420.6	1432.1
47.5°	1199.8	1234.4	1295.8	1347.6	1366.8
50°	1119.2	1155.7	1220.9	1274.7	1286.2
52.5°	1038.6	1077.0	1146.1	1203.7	1209.4
55°	954.1	996.3	1069.3	1124.9	1136.5
57.5°	877.3	913.8	992.5	1050.1	1063.5
60°	792.8	833.2	917.6	971.4	988.6
62.5°	712.2	754.4	842.7	896.5	911.9
65°	627.7	675.7	762.1	825.5	840.8
67.5°	554.8	600.9	693.0	754.4	769.8
70°	470.3	522.2	620.1	683.4	698.8
72.5°	397.4	451.1	549.0	610.5	633.5
75°	318.7	380.1	478.0	543.3	558.6
77.5°	241.9	312.9	412.7	462.6	462.6
80°	172.8	247.6	339.8	362.8	366.7
82.5°	113.3	186.2	251.5	249.6	249.6
85°	65.3	120.9	149.7	145.9	145.9
87.5°	25.0	49.9	53.8	53.8	51.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)