

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: P276671

Luminaire Tested: **24CZ2-70HE-S-UNV-L92765-W2A1-U-3500K**

Issue Date: 3/3/2020

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: P276671
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70HE-S-UNV-L92765-W2A1-U-3500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5996.8 lumens
Efficiency: N/A
Efficacy: 111.6 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

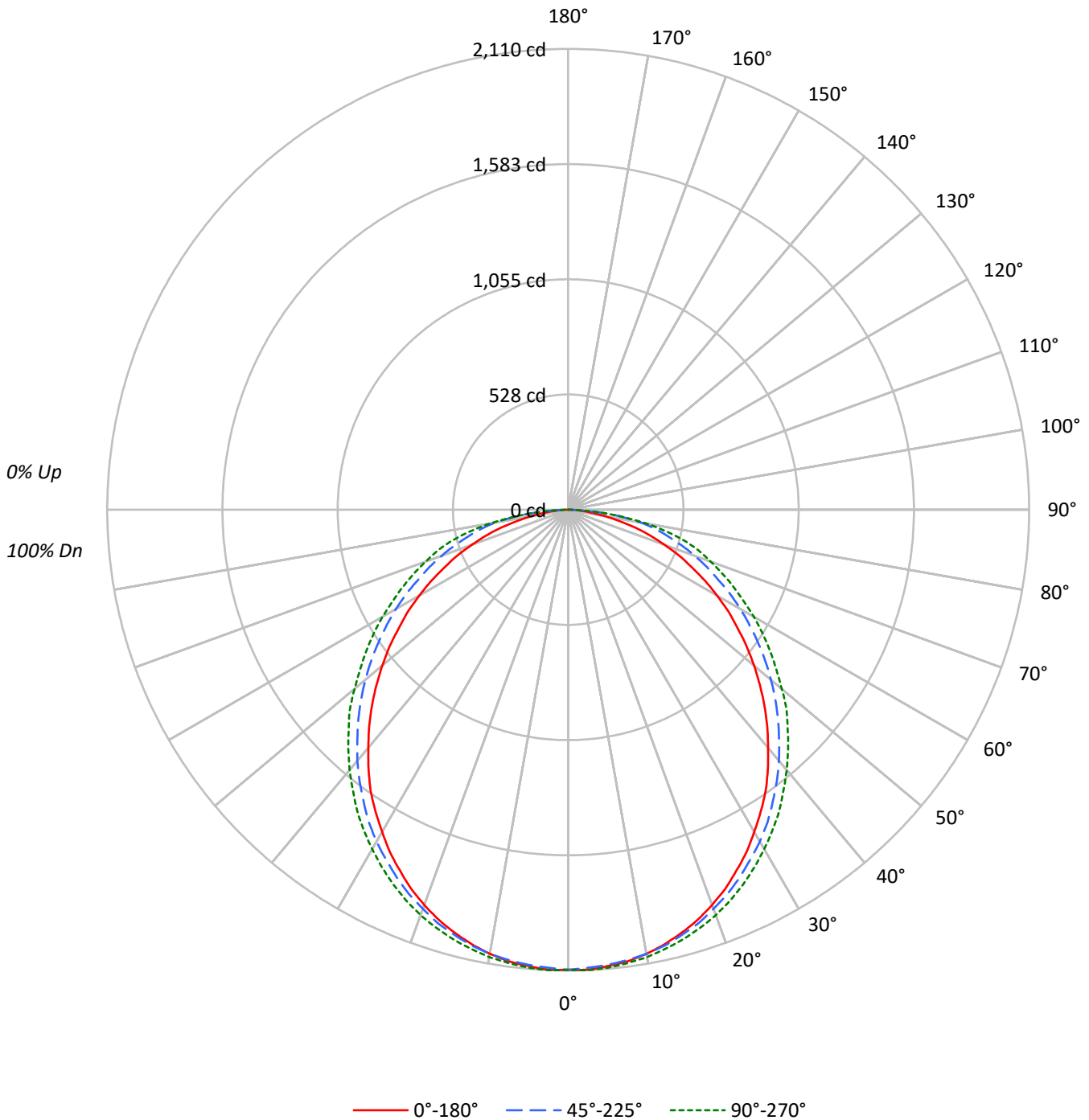
Input Watts (W): 53.754
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2835	2835	2835
5°	2833	2825	2843
10°	2821	2821	2842
15°	2794	2807	2836
20°	2757	2785	2828
25°	2706	2757	2811
30°	2646	2726	2788
35°	2587	2681	2766
40°	2499	2636	2733
45°	2418	2584	2704
50°	2325	2536	2671
55°	2221	2489	2645
60°	2117	2450	2640
65°	1983	2408	2656
70°	1836	2420	2727
75°	1644	2466	2882
80°	1328	2612	2819
85°	1000	2294	2235



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.4	3.3
10°-20°	569.9	9.5
20°-30°	856.7	14.3
30°-40°	1020.4	17.0
40°-50°	1044.4	17.4
50°-60°	940.2	15.7
60°-70°	738.4	12.3
70°-80°	479.2	8.0
80°-90°	148.2	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°	1626.0	27.1
0°-40°	2646.4	44.1
0°-60°	4631.0	77.2
0°-90°	5996.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5996.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2107	2107	2107	2107	2107	
5°	2097	2101	2092	2103	2105	199
15°	2006	2012	2015	2032	2036	566
25°	1823	1838	1857	1888	1893	840
35°	1575	1594	1632	1672	1684	983
45°	1270	1301	1358	1410	1421	980
55°	947	989	1061	1116	1128	849
65°	623	670	756	819	834	620
75°	316	377	474	539	554	335
85°	65	120	149	145	145	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2106.7	2106.7	2106.7	2106.7	2106.7
2.5°	2108.6	2108.6	2099.1	2108.6	2110.5
5°	2097.2	2101.0	2091.5	2102.9	2104.8
7.5°	2085.8	2085.8	2080.0	2091.5	2093.4
10°	2064.8	2066.7	2064.8	2078.1	2080.0
12.5°	2038.1	2041.9	2043.8	2057.2	2059.1
15°	2005.7	2011.5	2015.3	2032.4	2036.2
17.5°	1969.6	1975.3	1984.8	2003.8	2007.7
20°	1925.7	1933.4	1944.8	1969.6	1975.3
22.5°	1878.1	1885.7	1904.8	1927.7	1937.2
25°	1822.9	1838.1	1857.2	1887.7	1893.4
27.5°	1767.7	1781.0	1805.7	1838.1	1845.7
30°	1702.9	1723.8	1754.3	1786.7	1794.3
32.5°	1640.0	1661.0	1697.2	1731.5	1741.0
35°	1575.3	1594.3	1632.4	1672.4	1683.8
37.5°	1501.0	1525.7	1567.6	1607.6	1619.1
40°	1422.9	1453.4	1501.0	1542.9	1556.2
42.5°	1348.6	1381.0	1428.6	1474.3	1489.6
45°	1270.5	1301.0	1358.1	1409.5	1421.0
47.5°	1190.5	1224.8	1285.7	1337.2	1356.2
50°	1110.5	1146.7	1211.4	1264.8	1276.2
52.5°	1030.5	1068.6	1137.2	1194.3	1200.0
55°	946.7	988.6	1061.0	1116.2	1127.6
57.5°	870.5	906.7	984.8	1041.9	1055.3
60°	786.7	826.7	910.5	963.8	981.0
62.5°	706.7	748.6	836.2	889.5	904.8
65°	622.9	670.5	756.2	819.1	834.3
67.5°	550.5	596.2	687.6	748.6	763.8
70°	466.7	518.1	615.2	678.1	693.3
72.5°	394.3	447.6	544.8	605.7	628.6
75°	316.2	377.1	474.3	539.1	554.3
77.5°	240.0	310.5	409.5	459.1	459.1
80°	171.4	245.7	337.1	360.0	363.8
82.5°	112.4	184.8	249.5	247.6	247.6
85°	64.8	120.0	148.6	144.8	144.8
87.5°	24.8	49.5	53.3	53.3	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)