

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: P276673

Luminaire Tested: **24CZ2-70HE-S-UNV-L92765-W2A1-U-4500K**

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: P276673
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-4500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 4500K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6350.6 lumens
Efficiency: N/A
Efficacy: 116.1 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

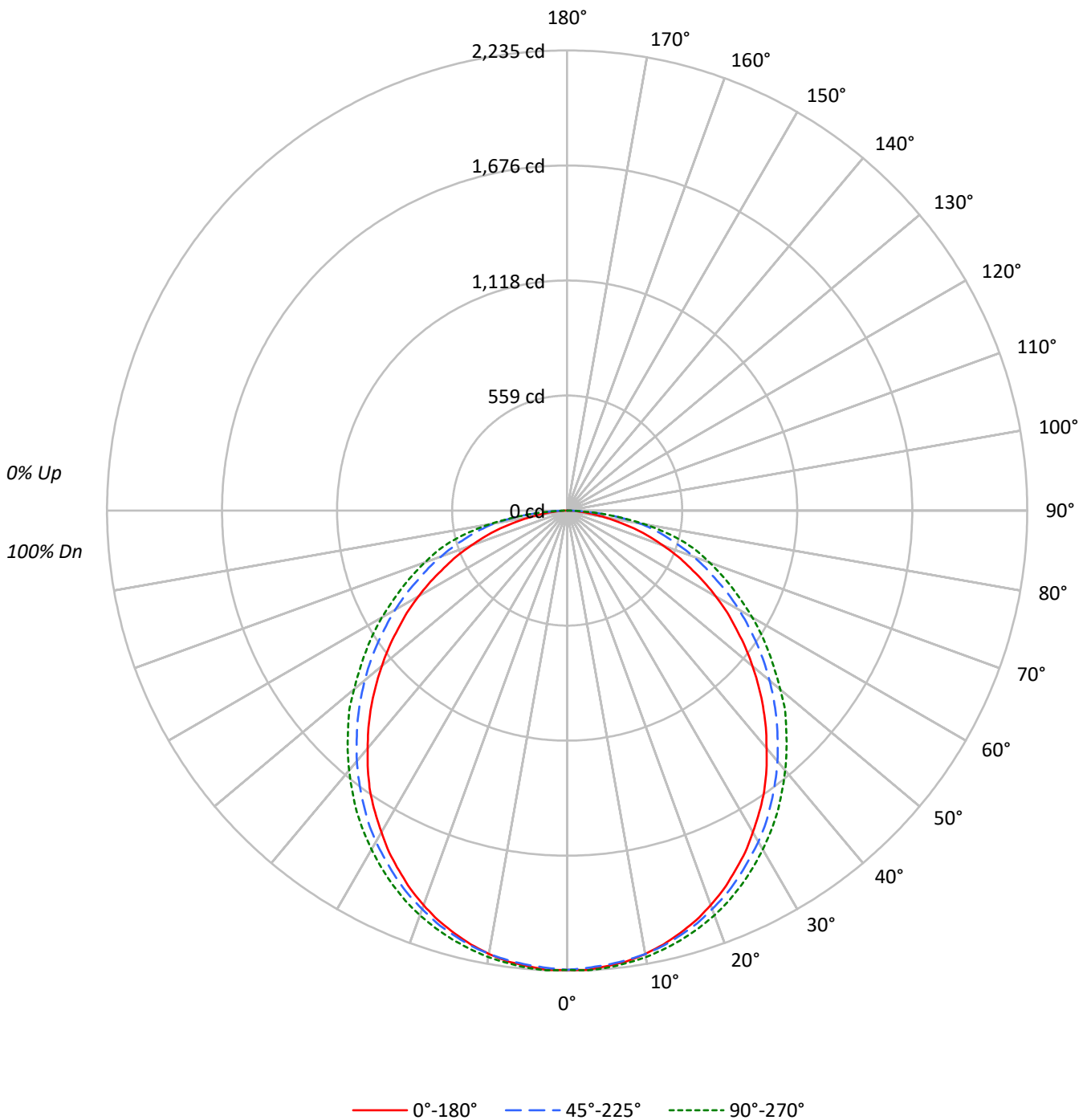
Input Watts (W): 54.684
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3002	3002	3002
5°	3000	2992	3011
10°	2987	2987	3010
15°	2959	2973	3004
20°	2920	2949	2995
25°	2866	2920	2977
30°	2802	2886	2952
35°	2740	2839	2929
40°	2647	2792	2895
45°	2560	2737	2863
50°	2462	2685	2829
55°	2352	2636	2801
60°	2242	2595	2796
65°	2100	2550	2813
70°	1944	2563	2889
75°	1741	2611	3052
80°	1406	2766	2985
85°	1059	2428	2367



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.2	3.3
10°-20°	603.5	9.5
20°-30°	907.2	14.3
30°-40°	1080.6	17.0
40°-50°	1106.0	17.4
50°-60°	995.7	15.7
60°-70°	782.0	12.3
70°-80°	507.5	8.0
80°-90°	157.0	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°	1721.9	27.1
0°-40°	2802.6	44.1
0°-60°	4904.2	77.2
0°-90°	6350.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6350.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2231	2231	2231	2231	2231	
5°	2221	2225	2215	2227	2229	211
15°	2124	2130	2134	2152	2156	599
25°	1930	1947	1967	1999	2005	889
35°	1668	1688	1729	1771	1783	1041
45°	1346	1378	1438	1493	1505	1037
55°	1002	1047	1124	1182	1194	899
65°	660	710	801	867	884	657
75°	335	399	502	571	587	354
85°	69	127	157	153	153	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2231.0	2231.0	2231.0	2231.0	2231.0
2.5°	2233.0	2233.0	2222.9	2233.0	2235.1
5°	2220.9	2225.0	2214.9	2227.0	2229.0
7.5°	2208.8	2208.8	2202.8	2214.9	2216.9
10°	2186.6	2188.7	2186.6	2200.8	2202.8
12.5°	2158.4	2162.4	2164.5	2178.6	2180.6
15°	2124.1	2130.2	2134.2	2152.3	2156.4
17.5°	2085.8	2091.8	2101.9	2122.1	2126.1
20°	2039.4	2047.5	2059.6	2085.8	2091.8
22.5°	1989.0	1997.0	2017.2	2041.4	2051.5
25°	1930.5	1946.6	1966.8	1999.0	2005.1
27.5°	1872.0	1886.1	1912.3	1946.6	1954.7
30°	1803.4	1825.6	1857.8	1892.1	1900.2
32.5°	1736.8	1759.0	1797.3	1833.6	1843.7
35°	1668.2	1688.4	1728.7	1771.1	1783.2
37.5°	1589.5	1615.8	1660.2	1702.5	1714.6
40°	1506.8	1539.1	1589.5	1633.9	1648.0
42.5°	1428.2	1462.5	1512.9	1561.3	1577.4
45°	1345.5	1377.7	1438.3	1492.7	1504.8
47.5°	1260.7	1297.1	1361.6	1416.1	1436.2
50°	1176.0	1214.4	1282.9	1339.4	1351.5
52.5°	1091.3	1131.6	1204.3	1264.8	1270.8
55°	1002.5	1046.9	1123.6	1182.1	1194.2
57.5°	921.9	960.2	1042.9	1103.4	1117.5
60°	833.1	875.5	964.2	1020.7	1038.9
62.5°	748.4	792.8	885.5	942.0	958.2
65°	659.6	710.1	800.8	867.4	883.5
67.5°	583.0	631.4	728.2	792.8	808.9
70°	494.2	548.7	651.6	718.1	734.3
72.5°	417.6	474.0	576.9	641.5	665.7
75°	334.9	399.4	502.3	570.9	587.0
77.5°	254.2	328.8	433.7	486.1	486.1
80°	181.5	260.2	357.0	381.2	385.3
82.5°	119.0	195.7	264.3	262.2	262.2
85°	68.6	127.1	157.3	153.3	153.3
87.5°	26.2	52.4	56.5	56.5	54.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)