

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: P276674

Luminaire Tested: **24CZ2-70HE-S-UNV-L92765-W2A1-U-5000K**

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: P276674
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-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6478.9 lumens
Efficiency: N/A
Efficacy: 117.9 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

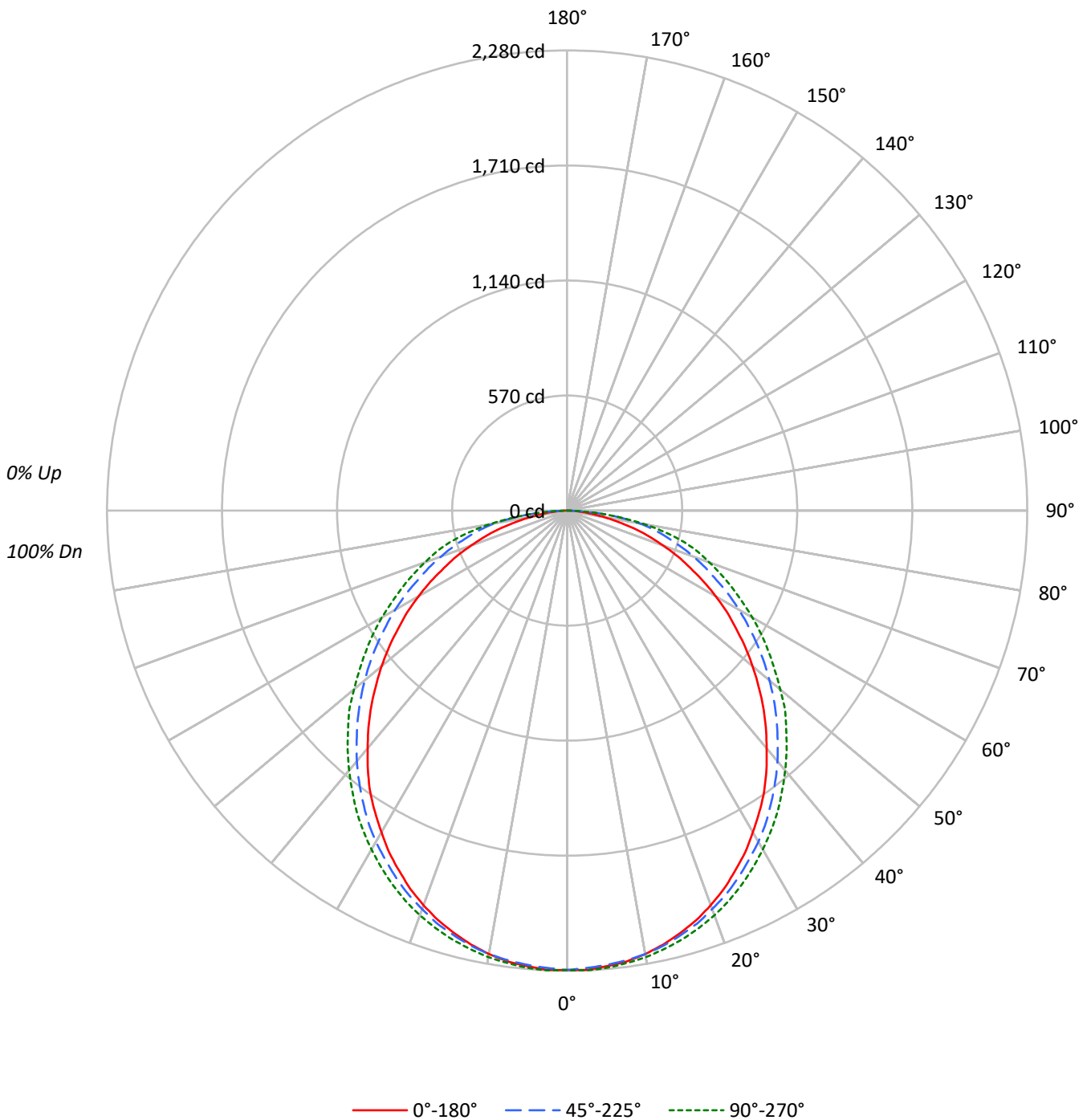
Input Watts (W): 54.963
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3062	3062	3062
5°	3060	3052	3071
10°	3048	3048	3070
15°	3019	3033	3064
20°	2979	3008	3056
25°	2924	2979	3037
30°	2858	2945	3012
35°	2795	2897	2988
40°	2700	2848	2953
45°	2612	2792	2921
50°	2511	2740	2886
55°	2399	2689	2858
60°	2287	2647	2852
65°	2142	2601	2870
70°	1983	2615	2947
75°	1776	2664	3113
80°	1435	2823	3046
85°	1081	2478	2414



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.5	3.3
10°-20°	615.7	9.5
20°-30°	925.5	14.3
30°-40°	1102.4	17.0
40°-50°	1128.3	17.4
50°-60°	1015.8	15.7
60°-70°	797.7	12.3
70°-80°	517.8	8.0
80°-90°	160.1	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°	1756.7	27.1
0°-40°	2859.1	44.1
0°-60°	5003.3	77.2
0°-90°	6478.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6478.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2276	2276	2276	2276	2276	
5°	2266	2270	2260	2272	2274	215
15°	2167	2173	2177	2196	2200	611
25°	1969	1986	2006	2039	2046	907
35°	1702	1722	1764	1807	1819	1062
45°	1373	1406	1467	1523	1535	1058
55°	1023	1068	1146	1206	1218	917
65°	673	724	817	885	901	670
75°	342	408	512	582	599	362
85°	70	130	160	156	156	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2276.1	2276.1	2276.1	2276.1	2276.1
2.5°	2278.1	2278.1	2267.8	2278.1	2280.2
5°	2265.8	2269.9	2259.6	2271.9	2274.0
7.5°	2253.4	2253.4	2247.3	2259.6	2261.7
10°	2230.8	2232.8	2230.8	2245.2	2247.3
12.5°	2202.0	2206.1	2208.2	2222.6	2224.6
15°	2167.0	2173.2	2177.3	2195.8	2199.9
17.5°	2127.9	2134.1	2144.4	2164.9	2169.1
20°	2080.6	2088.8	2101.1	2127.9	2134.1
22.5°	2029.1	2037.3	2057.9	2082.6	2092.9
25°	1969.4	1985.9	2006.5	2039.4	2045.6
27.5°	1909.8	1924.2	1950.9	1985.9	1994.1
30°	1839.8	1862.4	1895.3	1930.3	1938.6
32.5°	1771.9	1794.5	1833.6	1870.7	1880.9
35°	1701.9	1722.5	1763.6	1806.9	1819.2
37.5°	1621.6	1648.4	1693.7	1736.9	1749.2
40°	1537.3	1570.2	1621.6	1666.9	1681.3
42.5°	1457.0	1492.0	1543.4	1592.8	1609.3
45°	1372.6	1405.6	1467.3	1522.9	1535.2
47.5°	1286.2	1323.2	1389.1	1444.7	1465.2
50°	1199.8	1238.9	1308.8	1366.5	1378.8
52.5°	1113.3	1154.5	1228.6	1290.3	1296.5
55°	1022.8	1068.1	1146.3	1205.9	1218.3
57.5°	940.5	979.6	1063.9	1125.7	1140.1
60°	849.9	893.1	983.7	1041.3	1059.8
62.5°	763.5	808.8	903.4	961.1	977.5
65°	672.9	724.4	817.0	884.9	901.4
67.5°	594.7	644.1	742.9	808.8	825.2
70°	504.2	559.8	664.7	732.6	749.1
72.5°	426.0	483.6	588.6	654.4	679.1
75°	341.6	407.5	512.4	582.4	598.9
77.5°	259.3	335.4	442.5	496.0	496.0
80°	185.2	265.5	364.3	388.9	393.1
82.5°	121.4	199.6	269.6	267.5	267.5
85°	70.0	129.6	160.5	156.4	156.4
87.5°	26.8	53.5	57.6	57.6	55.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)