

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: P276677

Luminaire Tested: **24CZ2-70HE-S-UNV-L92765-W2A1-U-6500K**

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: P276677
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-6500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 6500K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6651.8 lumens
Efficiency: N/A
Efficacy: 118.4 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

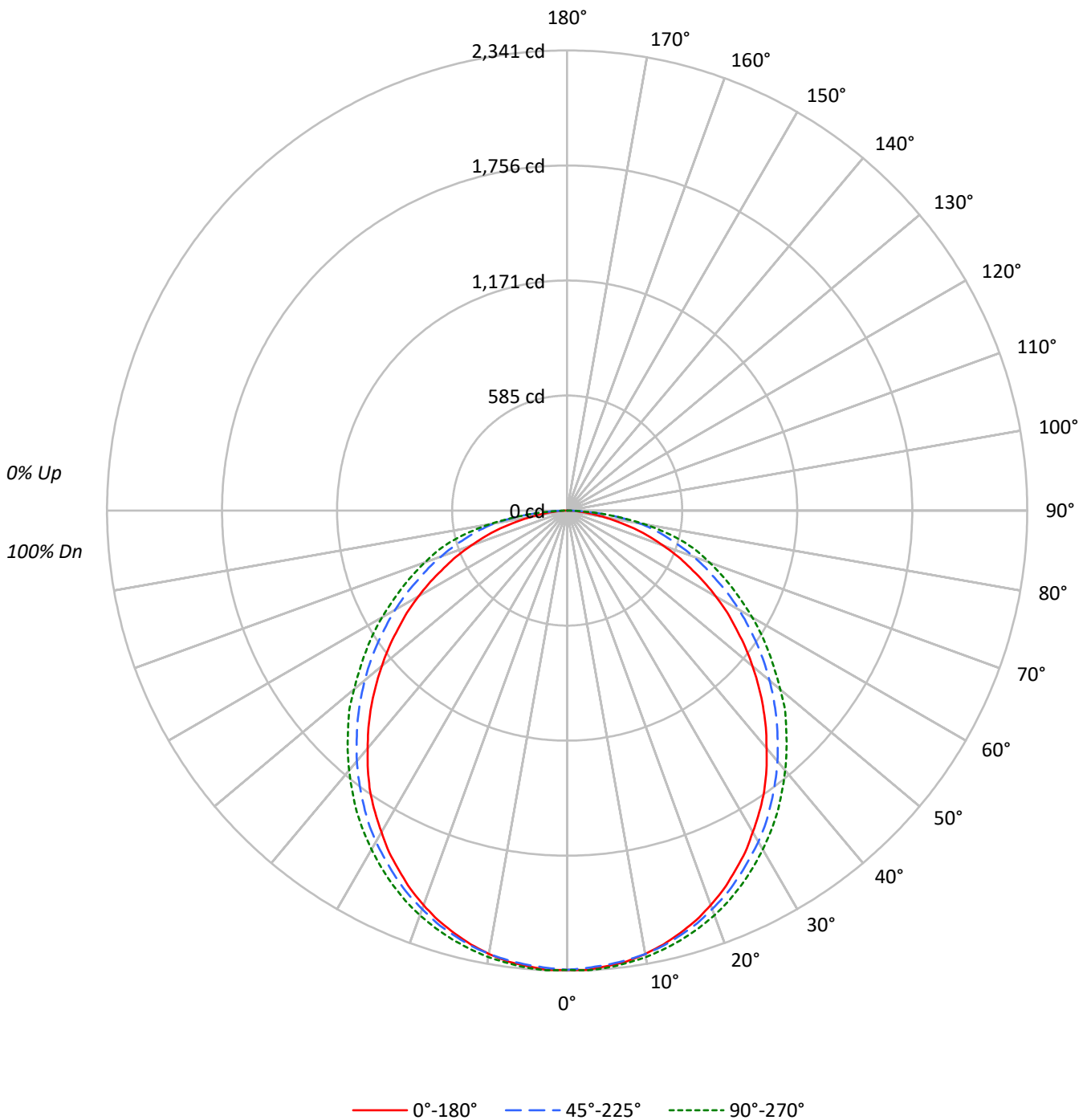
Input Watts (W): 56.172
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3144	3144	3144
5°	3142	3133	3153
10°	3129	3129	3152
15°	3099	3114	3146
20°	3059	3089	3137
25°	3002	3058	3118
30°	2935	3023	3092
35°	2870	2974	3068
40°	2772	2924	3032
45°	2682	2867	2999
50°	2578	2813	2963
55°	2463	2761	2934
60°	2348	2718	2928
65°	2200	2670	2946
70°	2037	2685	3026
75°	1823	2735	3196
80°	1474	2898	3127
85°	1108	2544	2479



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.2	3.3
10°-20°	632.1	9.5
20°-30°	950.2	14.3
30°-40°	1131.9	17.0
40°-50°	1158.4	17.4
50°-60°	1042.9	15.7
60°-70°	819.0	12.3
70°-80°	531.6	8.0
80°-90°	164.4	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°	1803.6	27.1
0°-40°	2935.5	44.1
0°-60°	5136.8	77.2
0°-90°	6651.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6651.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2337	2337	2337	2337	2337	
5°	2326	2330	2320	2333	2335	221
15°	2225	2231	2235	2254	2259	627
25°	2022	2039	2060	2094	2100	931
35°	1747	1768	1811	1855	1868	1090
45°	1409	1443	1506	1564	1576	1086
55°	1050	1097	1177	1238	1251	941
65°	691	744	839	908	925	688
75°	351	418	526	598	615	371
85°	72	133	165	161	161	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2336.8	2336.8	2336.8	2336.8	2336.8
2.5°	2338.9	2338.9	2328.4	2338.9	2341.1
5°	2326.3	2330.5	2319.9	2332.6	2334.7
7.5°	2313.6	2313.6	2307.2	2319.9	2322.0
10°	2290.3	2292.5	2290.3	2305.1	2307.2
12.5°	2260.8	2265.0	2267.1	2281.9	2284.0
15°	2224.8	2231.2	2235.4	2254.4	2258.6
17.5°	2184.7	2191.0	2201.6	2222.7	2227.0
20°	2136.1	2144.6	2157.2	2184.7	2191.0
22.5°	2083.3	2091.7	2112.9	2138.2	2148.8
25°	2022.0	2038.9	2060.0	2093.8	2100.2
27.5°	1960.7	1975.5	2003.0	2038.9	2047.4
30°	1888.9	1912.1	1945.9	1981.9	1990.3
32.5°	1819.2	1842.4	1882.6	1920.6	1931.2
35°	1747.3	1768.5	1810.7	1855.1	1867.8
37.5°	1664.9	1692.4	1738.9	1783.3	1795.9
40°	1578.3	1612.1	1664.9	1711.4	1726.2
42.5°	1495.9	1531.8	1584.6	1635.4	1652.3
45°	1409.3	1443.1	1506.5	1563.5	1576.2
47.5°	1320.5	1358.6	1426.2	1483.2	1504.4
50°	1231.8	1271.9	1343.8	1402.9	1415.6
52.5°	1143.1	1185.3	1261.4	1324.8	1331.1
55°	1050.1	1096.6	1176.9	1238.1	1250.8
57.5°	965.6	1005.7	1092.3	1155.7	1170.5
60°	872.6	917.0	1009.9	1069.1	1088.1
62.5°	783.9	830.4	927.5	986.7	1003.6
65°	690.9	743.7	838.8	908.5	925.4
67.5°	610.6	661.3	762.7	830.4	847.3
70°	517.7	574.7	682.5	752.2	769.1
72.5°	437.4	496.5	604.3	671.9	697.2
75°	350.7	418.3	526.1	597.9	614.8
77.5°	266.2	344.4	454.3	509.2	509.2
80°	190.2	272.6	374.0	399.3	403.6
82.5°	124.7	204.9	276.8	274.7	274.7
85°	71.8	133.1	164.8	160.6	160.6
87.5°	27.5	54.9	59.2	59.2	57.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)