

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: P276672

Luminaire Tested: **24CZ2-70HE-S-UNV-L92765-W2A1-U-4000K**

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: P276672
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-4000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6189.6 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

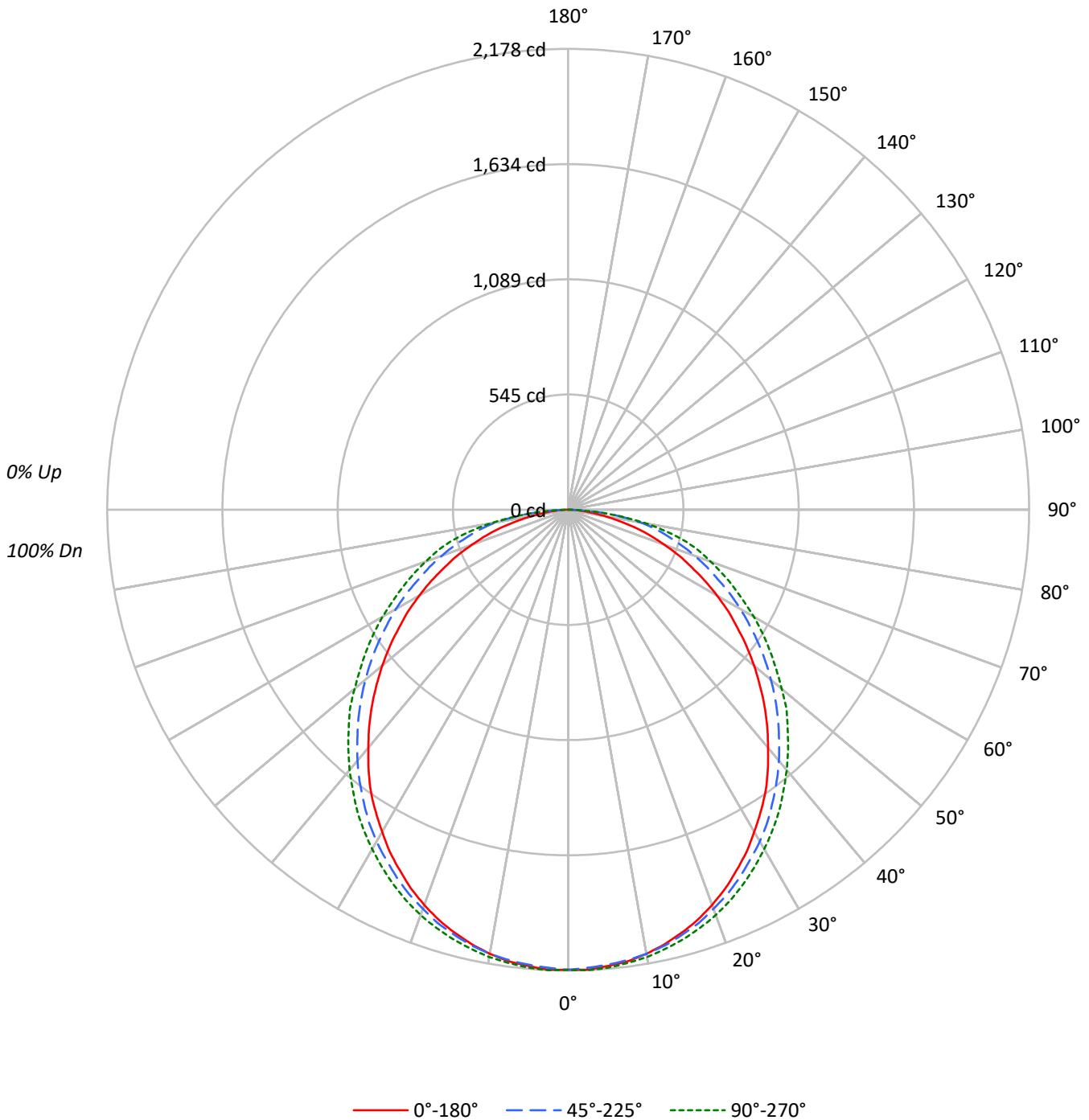
Input Watts (W): 54.312
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P276672

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L92765-W2A1-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P276672

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L92765-W2A1-U-4000K

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°	2926	2926	2926
5°	2924	2916	2934
10°	2912	2912	2933
15°	2884	2897	2928
20°	2846	2874	2919
25°	2793	2846	2901
30°	2731	2813	2877
35°	2671	2768	2855
40°	2579	2721	2821
45°	2495	2667	2791
50°	2399	2617	2757
55°	2292	2569	2730
60°	2185	2529	2725
65°	2047	2485	2741
70°	1895	2498	2815
75°	1697	2545	2974
80°	1371	2696	2910
85°	1031	2368	2306



TEST NUMBER: P276672

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L92765-W2A1-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.9	3.3
10°-20°	588.2	9.5
20°-30°	884.2	14.3
30°-40°	1053.2	17.0
40°-50°	1077.9	17.4
50°-60°	970.5	15.7
60°-70°	762.1	12.3
70°-80°	494.6	8.0
80°-90°	153.0	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°	1678.3	27.1
0°-40°	2731.5	44.1
0°-60°	4779.9	77.2
0°-90°	6189.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6189.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2174	2174	2174	2174	2174	
5°	2165	2168	2159	2170	2172	206
15°	2070	2076	2080	2098	2102	584
25°	1882	1897	1917	1948	1954	867
35°	1626	1646	1685	1726	1738	1014
45°	1311	1343	1402	1455	1467	1011
55°	977	1020	1095	1152	1164	876
65°	643	692	780	845	861	640
75°	326	389	490	556	572	345
85°	67	124	153	149	149	81
90°	0	0	0	0	0	



TEST NUMBER: P276672

CATALOG NUMBER: 24CZ2-70HE-S-UNV-L92765-W2A1-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2174.4	2174.4	2174.4	2174.4	2174.4
2.5°	2176.4	2176.4	2166.6	2176.4	2178.4
5°	2164.6	2168.5	2158.7	2170.5	2172.5
7.5°	2152.8	2152.8	2146.9	2158.7	2160.7
10°	2131.2	2133.2	2131.2	2145.0	2146.9
12.5°	2103.7	2107.6	2109.6	2123.3	2125.3
15°	2070.2	2076.1	2080.1	2097.8	2101.7
17.5°	2032.9	2038.8	2048.6	2068.3	2072.2
20°	1987.7	1995.5	2007.3	2032.9	2038.8
22.5°	1938.5	1946.4	1966.0	1989.6	1999.5
25°	1881.5	1897.2	1916.9	1948.4	1954.3
27.5°	1824.5	1838.3	1863.8	1897.2	1905.1
30°	1757.6	1779.3	1810.7	1844.2	1852.0
32.5°	1692.8	1714.4	1751.7	1787.1	1797.0
35°	1625.9	1645.6	1684.9	1726.2	1738.0
37.5°	1549.2	1574.8	1618.1	1659.3	1671.1
40°	1468.6	1500.1	1549.2	1592.5	1606.3
42.5°	1392.0	1425.4	1474.5	1521.7	1537.4
45°	1311.4	1342.8	1401.8	1454.9	1466.7
47.5°	1228.8	1264.2	1327.1	1380.2	1399.8
50°	1146.2	1183.6	1250.4	1305.5	1317.3
52.5°	1063.6	1103.0	1173.7	1232.7	1238.6
55°	977.1	1020.4	1095.1	1152.1	1163.9
57.5°	898.5	935.8	1016.4	1075.4	1089.2
60°	812.0	853.3	939.8	994.8	1012.5
62.5°	729.4	772.7	863.1	918.1	933.9
65°	642.9	692.0	780.5	845.4	861.1
67.5°	568.2	615.4	709.7	772.7	788.4
70°	481.7	534.8	635.0	699.9	715.6
72.5°	407.0	462.0	562.3	625.2	648.8
75°	326.4	389.3	489.5	556.4	572.1
77.5°	247.7	320.5	422.7	473.8	473.8
80°	176.9	253.6	348.0	371.6	375.5
82.5°	116.0	190.7	257.6	255.6	255.6
85°	66.8	123.9	153.4	149.4	149.4
87.5°	25.6	51.1	55.0	55.0	53.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)