

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: P276676

Luminaire Tested: **24CZ2-70HE-S-UNV-L92765-W2A1-U-5700K**

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: P276676
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-5700K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5700K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6607.1 lumens
Efficiency: N/A
Efficacy: 119.4 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

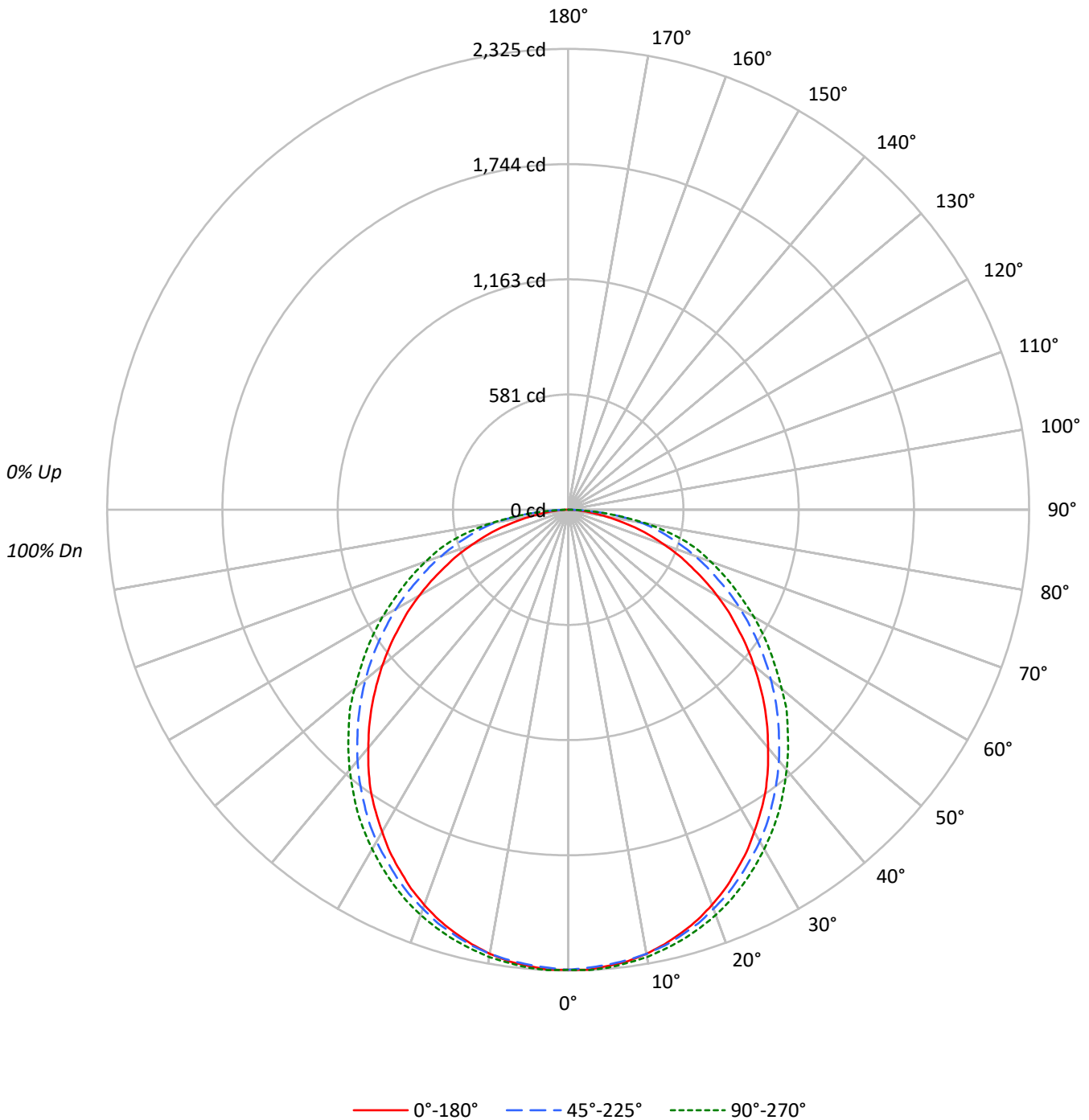
Input Watts (W): 55.335
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3123	3123	3123
5°	3121	3112	3132
10°	3108	3108	3131
15°	3078	3093	3125
20°	3038	3068	3116
25°	2982	3038	3097
30°	2915	3003	3071
35°	2851	2954	3047
40°	2754	2905	3012
45°	2664	2847	2979
50°	2561	2794	2943
55°	2447	2742	2914
60°	2332	2700	2908
65°	2185	2653	2926
70°	2023	2667	3005
75°	1811	2717	3175
80°	1464	2879	3106
85°	1102	2527	2462



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.7	3.3
10°-20°	627.9	9.5
20°-30°	943.8	14.3
30°-40°	1124.3	17.0
40°-50°	1150.6	17.4
50°-60°	1035.9	15.7
60°-70°	813.5	12.3
70°-80°	528.0	8.0
80°-90°	163.3	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°	1791.5	27.1
0°-40°	2915.7	44.1
0°-60°	5102.3	77.2
0°-90°	6607.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6607.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2321	2321	2321	2321	2321	
5°	2311	2315	2304	2317	2319	220
15°	2210	2216	2220	2239	2244	623
25°	2008	2025	2046	2080	2086	925
35°	1736	1757	1798	1843	1855	1083
45°	1400	1433	1496	1553	1566	1079
55°	1043	1089	1169	1230	1242	935
65°	686	739	833	902	919	683
75°	348	416	523	594	611	369
85°	71	132	164	160	160	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2321.1	2321.1	2321.1	2321.1	2321.1
2.5°	2323.2	2323.2	2312.7	2323.2	2325.3
5°	2310.6	2314.8	2304.3	2316.9	2319.0
7.5°	2298.0	2298.0	2291.7	2304.3	2306.4
10°	2274.9	2277.0	2274.9	2289.6	2291.7
12.5°	2245.6	2249.8	2251.9	2266.5	2268.6
15°	2209.9	2216.2	2220.4	2239.3	2243.5
17.5°	2170.0	2176.3	2186.8	2207.8	2212.0
20°	2121.7	2130.1	2142.7	2170.0	2176.3
22.5°	2069.3	2077.7	2098.7	2123.8	2134.3
25°	2008.4	2025.2	2046.2	2079.8	2086.1
27.5°	1947.6	1962.2	1989.5	2025.2	2033.6
30°	1876.2	1899.3	1932.9	1968.5	1976.9
32.5°	1806.9	1830.0	1869.9	1907.7	1918.2
35°	1735.6	1756.6	1798.5	1842.6	1855.2
37.5°	1653.7	1681.0	1727.2	1771.3	1783.9
40°	1567.7	1601.3	1653.7	1699.9	1714.6
42.5°	1485.8	1521.5	1574.0	1624.4	1641.1
45°	1399.8	1433.4	1496.3	1553.0	1565.6
47.5°	1311.7	1349.4	1416.6	1473.3	1494.2
50°	1223.5	1263.4	1334.7	1393.5	1406.1
52.5°	1135.4	1177.3	1252.9	1315.9	1322.2
55°	1043.0	1089.2	1168.9	1229.8	1242.4
57.5°	959.1	999.0	1085.0	1148.0	1162.7
60°	866.7	910.8	1003.2	1061.9	1080.8
62.5°	778.6	824.8	921.3	980.1	996.9
65°	686.3	738.7	833.2	902.4	919.2
67.5°	606.5	656.9	757.6	824.8	841.6
70°	514.2	570.8	677.9	747.1	763.9
72.5°	434.4	493.2	600.2	667.4	692.6
75°	348.4	415.5	522.6	593.9	610.7
77.5°	264.4	342.1	451.2	505.8	505.8
80°	188.9	270.7	371.5	396.6	400.8
82.5°	123.8	203.6	274.9	272.8	272.8
85°	71.4	132.2	163.7	159.5	159.5
87.5°	27.3	54.6	58.8	58.8	56.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)