

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: P276660

Luminaire Tested: **24CZ2-65HE-S-UNV-L92765-W2A1-U-2700K**

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: P276660
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: 24CZ2-65HE-S-UNV-L92765-W2A1-U-2700K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5091.2 lumens
Efficiency: N/A
Efficacy: 104.3 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

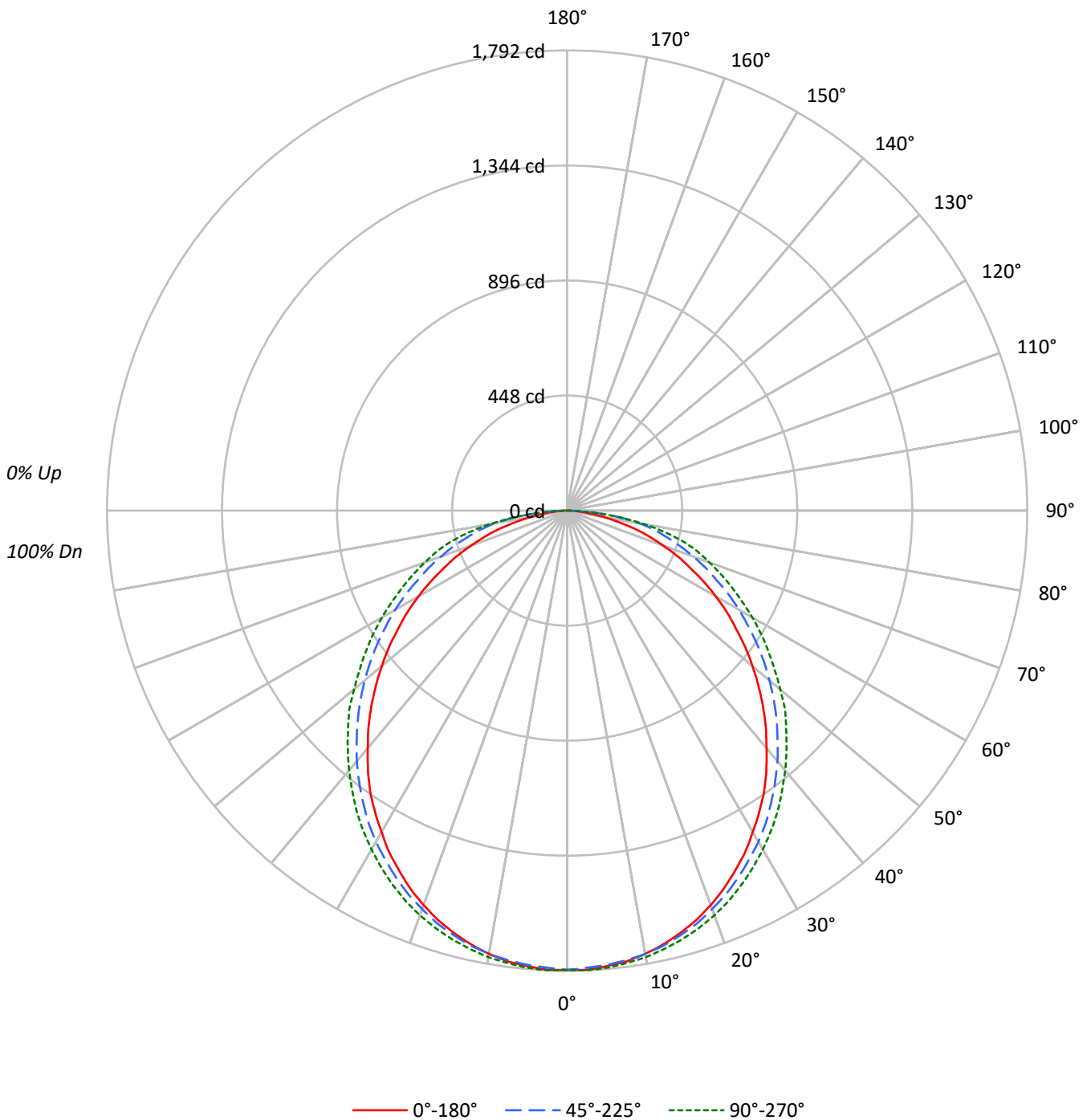
Input Watts (W): 48.825
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2407	2407	2407
5°	2405	2398	2414
10°	2395	2395	2413
15°	2372	2383	2408
20°	2341	2364	2401
25°	2298	2341	2386
30°	2246	2314	2367
35°	2197	2276	2348
40°	2122	2238	2321
45°	2052	2194	2296
50°	1973	2153	2268
55°	1885	2113	2246
60°	1797	2080	2241
65°	1684	2044	2255
70°	1559	2055	2316
75°	1395	2093	2446
80°	1127	2218	2393
85°	849	1947	1897



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.3	3.3
10°-20°	483.8	9.5
20°-30°	727.3	14.3
30°-40°	866.3	17.0
40°-50°	886.6	17.4
50°-60°	798.2	15.7
60°-70°	626.9	12.3
70°-80°	406.9	8.0
80°-90°	125.8	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°	1380.5	27.1
0°-40°	2246.8	44.1
0°-60°	3931.7	77.2
0°-90°	5091.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5091.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1789	1789	1789	1789	1789	
5°	1780	1784	1776	1785	1787	169
15°	1703	1708	1711	1726	1729	480
25°	1548	1561	1577	1603	1608	713
35°	1337	1354	1386	1420	1430	834
45°	1079	1104	1153	1197	1206	832
55°	804	839	901	948	957	721
65°	529	569	642	695	708	526
75°	268	320	403	458	471	284
85°	55	102	126	123	123	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1788.6	1788.6	1788.6	1788.6	1788.6
2.5°	1790.2	1790.2	1782.1	1790.2	1791.8
5°	1780.5	1783.7	1775.6	1785.4	1787.0
7.5°	1770.8	1770.8	1765.9	1775.6	1777.3
10°	1753.0	1754.6	1753.0	1764.3	1765.9
12.5°	1730.4	1733.6	1735.2	1746.5	1748.2
15°	1702.9	1707.7	1711.0	1725.5	1728.8
17.5°	1672.1	1677.0	1685.1	1701.3	1704.5
20°	1635.0	1641.4	1651.1	1672.1	1677.0
22.5°	1594.5	1601.0	1617.2	1636.6	1644.7
25°	1547.6	1560.6	1576.7	1602.6	1607.5
27.5°	1500.7	1512.1	1533.1	1560.6	1567.0
30°	1445.7	1463.5	1489.4	1516.9	1523.4
32.5°	1392.4	1410.2	1440.9	1470.0	1478.1
35°	1337.4	1353.6	1385.9	1419.9	1429.6
37.5°	1274.3	1295.3	1330.9	1364.9	1374.6
40°	1208.0	1233.9	1274.3	1309.9	1321.2
42.5°	1145.0	1172.4	1212.9	1251.7	1264.6
45°	1078.6	1104.5	1153.0	1196.7	1206.4
47.5°	1010.7	1039.8	1091.6	1135.3	1151.4
50°	942.8	973.5	1028.5	1073.8	1083.5
52.5°	874.9	907.2	965.4	1014.0	1018.8
55°	803.7	839.3	900.8	947.7	957.4
57.5°	739.0	769.8	836.1	884.6	895.9
60°	667.9	701.9	773.0	818.3	832.8
62.5°	600.0	635.5	709.9	755.2	768.2
65°	528.8	569.2	642.0	695.4	708.3
67.5°	467.4	506.2	583.8	635.5	648.5
70°	396.2	439.9	522.3	575.7	588.6
72.5°	334.8	380.0	462.5	514.3	533.7
75°	268.4	320.2	402.7	457.7	470.6
77.5°	203.8	263.6	347.7	389.7	389.7
80°	145.5	208.6	286.2	305.6	308.9
82.5°	95.4	156.9	211.8	210.2	210.2
85°	55.0	101.9	126.1	122.9	122.9
87.5°	21.0	42.0	45.3	45.3	43.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)