

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: P276422

Luminaire Tested: **24CZ2-65HE-S-UNV-L93050-W2A1-U-3000K**

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: P276422
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-L93050-W2A1-U-3000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5054.5 lumens
Efficiency: N/A
Efficacy: 101.0 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

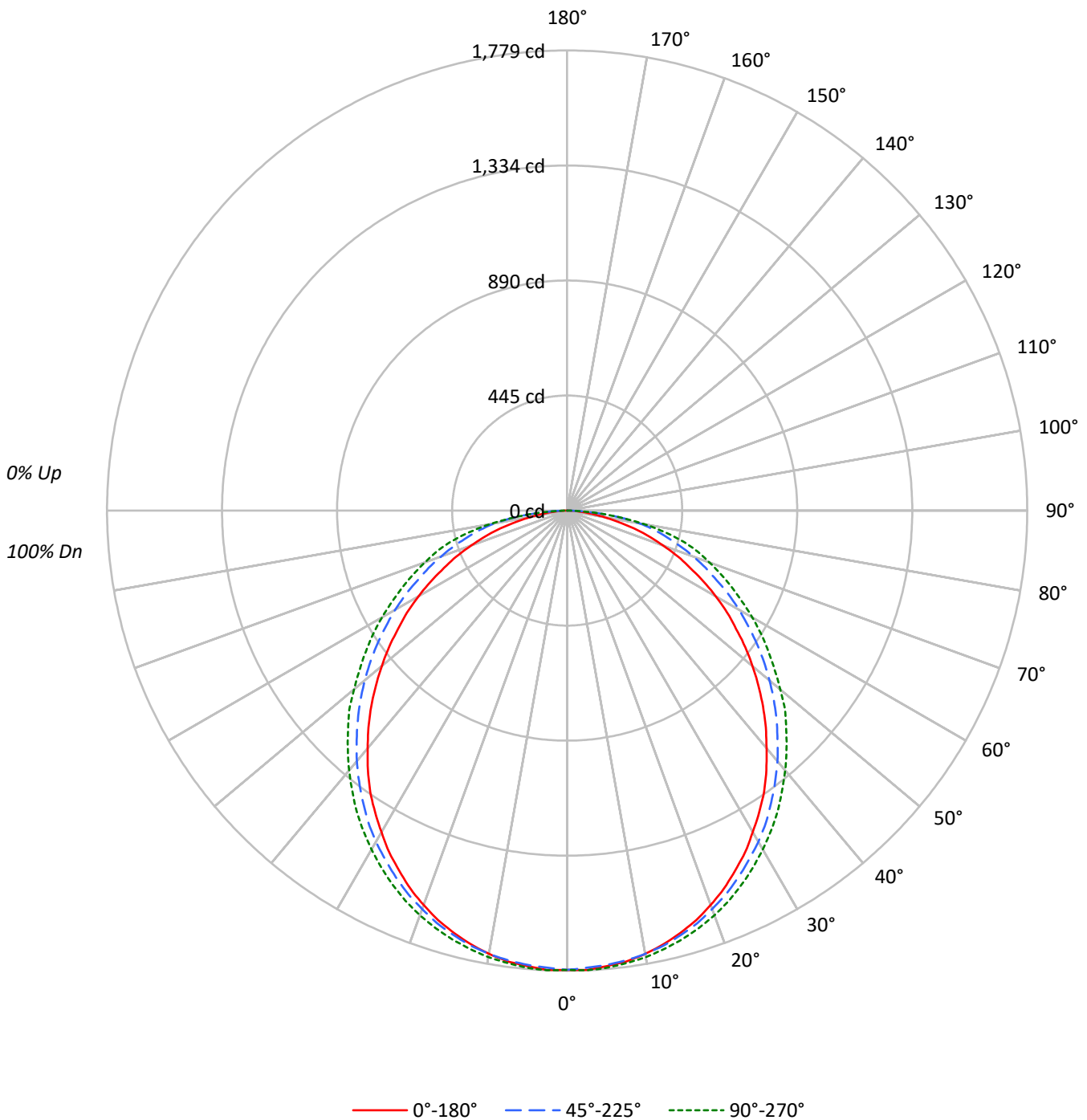
Input Watts (W): 50.043114
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2389	2389	2389
5°	2387	2381	2396
10°	2378	2378	2395
15°	2355	2366	2391
20°	2324	2347	2384
25°	2281	2324	2369
30°	2230	2297	2350
35°	2181	2260	2331
40°	2106	2222	2304
45°	2038	2178	2279
50°	1959	2137	2252
55°	1872	2098	2229
60°	1784	2065	2225
65°	1671	2029	2239
70°	1547	2040	2299
75°	1385	2078	2429
80°	1120	2202	2376
85°	843	1933	1883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.1	3.3
10°-20°	480.3	9.5
20°-30°	722.0	14.3
30°-40°	860.1	17.0
40°-50°	880.2	17.4
50°-60°	792.5	15.7
60°-70°	622.4	12.3
70°-80°	403.9	8.0
80°-90°	124.9	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°	1370.5	27.1
0°-40°	2230.6	44.1
0°-60°	3903.3	77.2
0°-90°	5054.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5054.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1776	1776	1776	1776	1776	
5°	1768	1771	1763	1772	1774	168
15°	1691	1695	1699	1713	1716	477
25°	1536	1549	1565	1591	1596	708
35°	1328	1344	1376	1410	1419	828
45°	1071	1096	1145	1188	1198	826
55°	798	833	894	941	950	715
65°	525	565	637	690	703	523
75°	266	318	400	454	467	282
85°	55	101	125	122	122	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1775.7	1775.7	1775.7	1775.7	1775.7
2.5°	1777.3	1777.3	1769.2	1777.3	1778.9
5°	1767.6	1770.9	1762.8	1772.5	1774.1
7.5°	1758.0	1758.0	1753.2	1762.8	1764.4
10°	1740.3	1742.0	1740.3	1751.6	1753.2
12.5°	1717.9	1721.1	1722.7	1733.9	1735.5
15°	1690.6	1695.4	1698.6	1713.1	1716.3
17.5°	1660.1	1664.9	1672.9	1689.0	1692.2
20°	1623.1	1629.6	1639.2	1660.1	1664.9
22.5°	1583.0	1589.4	1605.5	1624.8	1632.8
25°	1536.5	1549.3	1565.3	1591.0	1595.9
27.5°	1489.9	1501.1	1522.0	1549.3	1555.7
30°	1435.3	1453.0	1478.7	1505.9	1512.4
32.5°	1382.3	1400.0	1430.5	1459.4	1467.4
35°	1327.7	1343.8	1375.9	1409.6	1419.3
37.5°	1265.1	1286.0	1321.3	1355.0	1364.7
40°	1199.3	1225.0	1265.1	1300.4	1311.7
42.5°	1136.7	1164.0	1204.1	1242.6	1255.5
45°	1070.9	1096.5	1144.7	1188.1	1197.7
47.5°	1003.4	1032.3	1083.7	1127.1	1143.1
50°	936.0	966.5	1021.1	1066.0	1075.7
52.5°	868.6	900.7	958.5	1006.6	1011.5
55°	797.9	833.2	894.3	940.8	950.4
57.5°	733.7	764.2	830.0	878.2	889.4
60°	663.1	696.8	767.4	812.4	826.8
62.5°	595.6	631.0	704.8	749.8	762.6
65°	525.0	565.1	637.4	690.4	703.2
67.5°	464.0	502.5	579.6	631.0	643.8
70°	393.3	436.7	518.6	571.6	584.4
72.5°	332.3	377.3	459.2	510.5	529.8
75°	266.5	317.9	399.8	454.4	467.2
77.5°	202.3	261.7	345.2	386.9	386.9
80°	144.5	207.1	284.2	303.4	306.6
82.5°	94.7	155.7	210.3	208.7	208.7
85°	54.6	101.1	125.2	122.0	122.0
87.5°	20.9	41.7	45.0	45.0	43.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)