

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: P276414

Luminaire Tested: **24CZ2-55HE-S-UNV-L93050-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: P276414
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: 24CZ2-55HE-S-UNV-L93050-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: 5064.3 lumens
Efficiency: N/A
Efficacy: 123.1 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

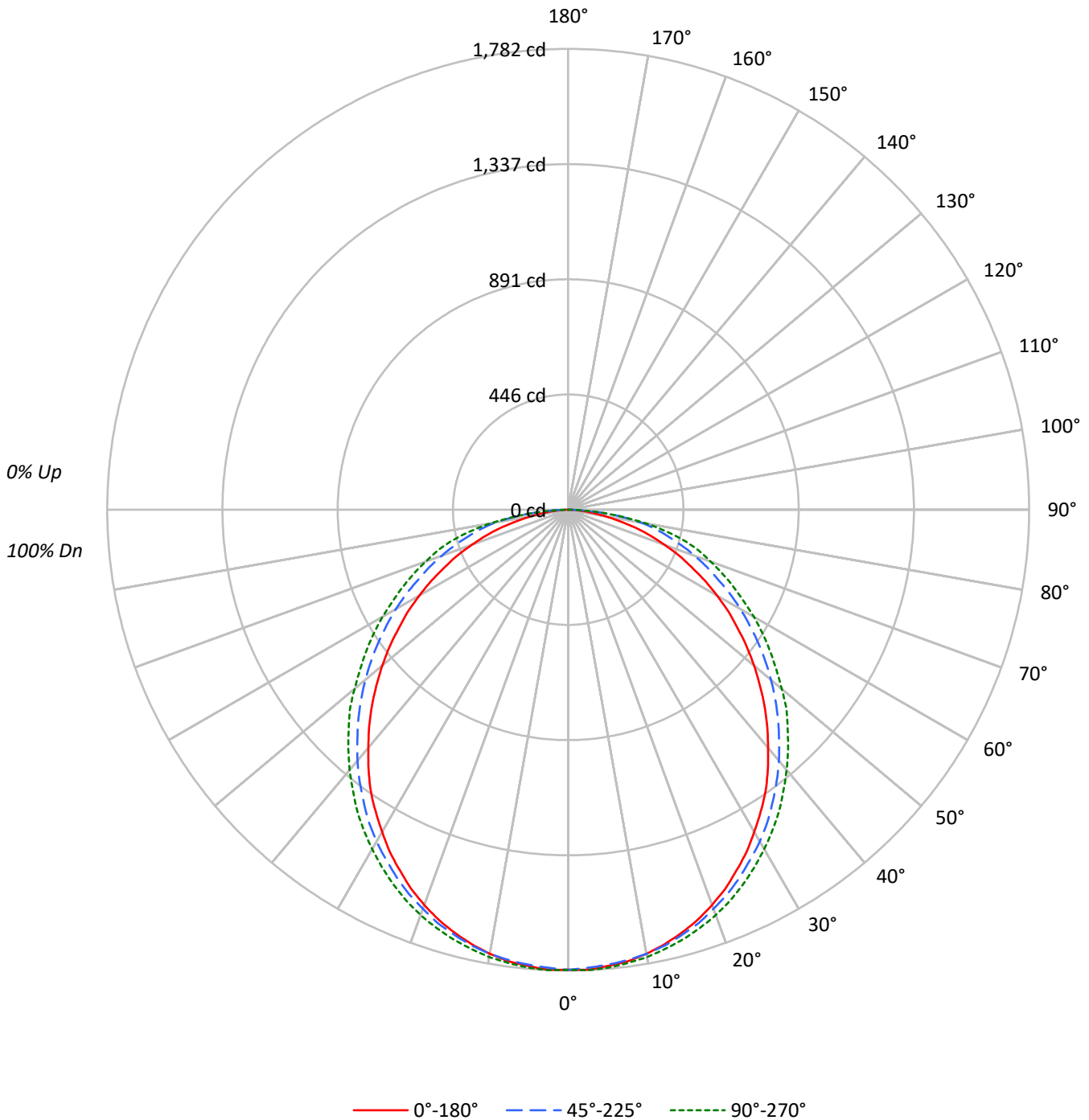
Input Watts (W): 41.125158
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2394	2394	2394
5°	2392	2386	2401
10°	2382	2382	2400
15°	2360	2371	2395
20°	2329	2352	2388
25°	2285	2328	2374
30°	2234	2302	2354
35°	2185	2264	2336
40°	2111	2226	2308
45°	2042	2182	2283
50°	1963	2142	2256
55°	1875	2102	2234
60°	1788	2069	2229
65°	1675	2033	2243
70°	1550	2044	2303
75°	1388	2082	2433
80°	1122	2206	2380
85°	844	1937	1888



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.4	3.3
10°-20°	481.3	9.5
20°-30°	723.5	14.3
30°-40°	861.8	17.0
40°-50°	882.0	17.4
50°-60°	794.0	15.7
60°-70°	623.6	12.3
70°-80°	404.7	8.0
80°-90°	125.2	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°	1373.1	27.1
0°-40°	2234.9	44.1
0°-60°	3910.9	77.2
0°-90°	5064.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5064.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1779	1779	1779	1779	1779	
5°	1771	1774	1766	1776	1778	168
15°	1694	1699	1702	1716	1720	478
25°	1539	1552	1568	1594	1599	709
35°	1330	1346	1379	1412	1422	830
45°	1073	1099	1147	1190	1200	827
55°	800	835	896	943	952	717
65°	526	566	639	692	705	524
75°	267	318	400	455	468	283
85°	55	101	126	122	122	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1779.1	1779.1	1779.1	1779.1	1779.1
2.5°	1780.7	1780.7	1772.7	1780.7	1782.3
5°	1771.1	1774.3	1766.3	1775.9	1777.5
7.5°	1761.4	1761.4	1756.6	1766.3	1767.9
10°	1743.7	1745.3	1743.7	1755.0	1756.6
12.5°	1721.2	1724.4	1726.0	1737.3	1738.9
15°	1693.9	1698.7	1701.9	1716.4	1719.6
17.5°	1663.3	1668.1	1676.2	1692.3	1695.5
20°	1626.3	1632.7	1642.4	1663.3	1668.1
22.5°	1586.1	1592.5	1608.6	1627.9	1636.0
25°	1539.4	1552.3	1568.4	1594.1	1599.0
27.5°	1492.8	1504.1	1525.0	1552.3	1558.7
30°	1438.1	1455.8	1481.5	1508.9	1515.3
32.5°	1385.0	1402.7	1433.3	1462.2	1470.3
35°	1330.3	1346.4	1378.6	1412.4	1422.0
37.5°	1267.6	1288.5	1323.9	1357.7	1367.3
40°	1201.6	1227.4	1267.6	1303.0	1314.2
42.5°	1138.9	1166.2	1206.5	1245.1	1257.9
45°	1072.9	1098.7	1146.9	1190.4	1200.0
47.5°	1005.4	1034.3	1085.8	1129.2	1145.3
50°	937.8	968.4	1023.1	1068.1	1077.8
52.5°	870.3	902.4	960.3	1008.6	1013.4
55°	799.5	834.9	896.0	942.6	952.3
57.5°	735.1	765.7	831.7	879.9	891.2
60°	664.4	698.1	768.9	814.0	828.4
62.5°	596.8	632.2	706.2	751.2	764.1
65°	526.0	566.2	638.6	691.7	704.6
67.5°	464.9	503.5	580.7	632.2	645.1
70°	394.1	437.5	519.6	572.7	585.5
72.5°	333.0	378.0	460.1	511.5	530.8
75°	267.0	318.5	400.5	455.2	468.1
77.5°	202.7	262.2	345.9	387.7	387.7
80°	144.8	207.5	284.7	304.0	307.2
82.5°	94.9	156.0	210.7	209.1	209.1
85°	54.7	101.3	125.5	122.3	122.3
87.5°	20.9	41.8	45.0	45.0	43.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)