

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: P276409

Luminaire Tested: **24CZ2-50HE-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: P276409
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: 24CZ2-50HE-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: 4586.1 lumens
Efficiency: N/A
Efficacy: 125.2 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

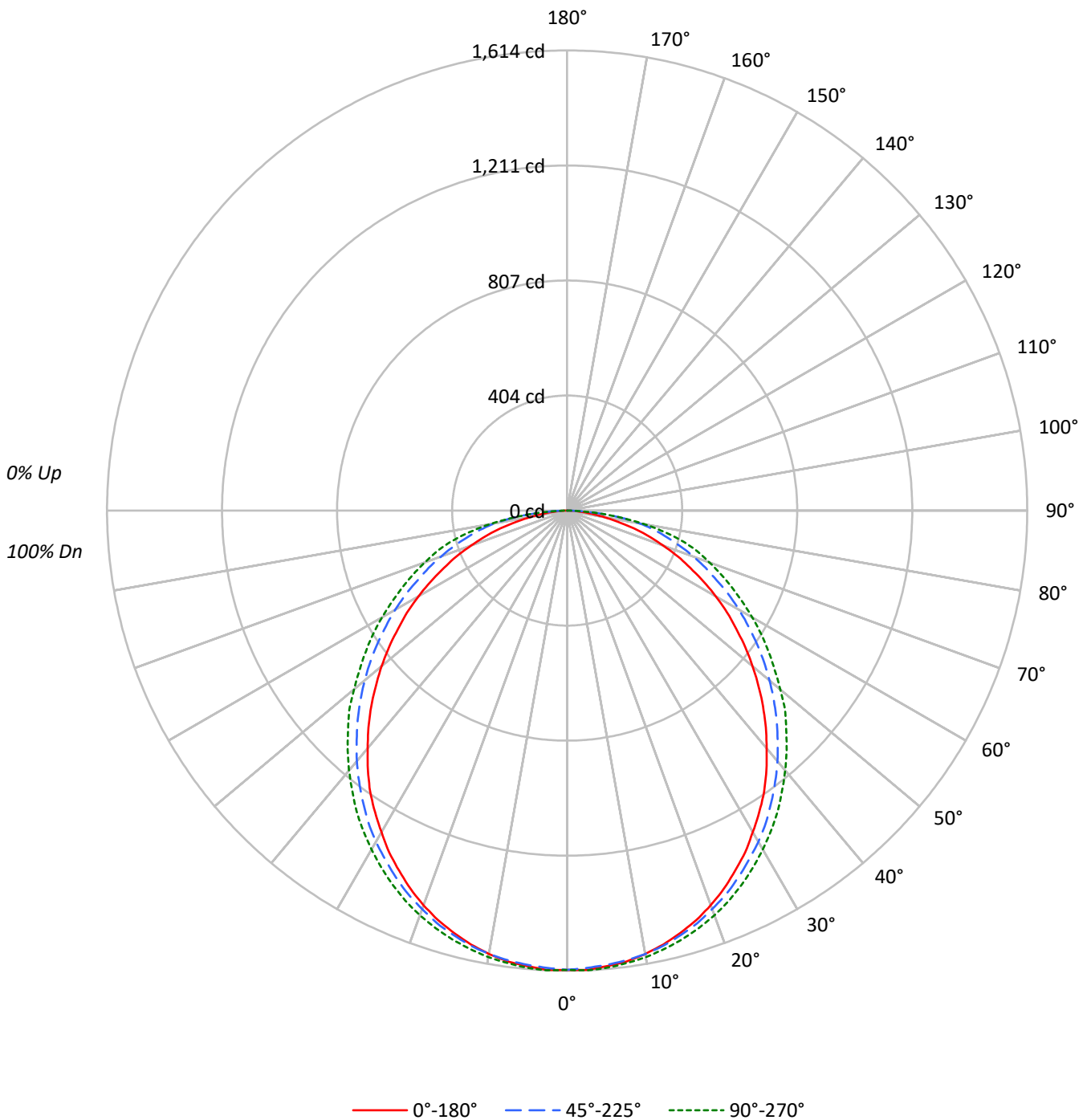
Input Watts (W): 36.640512
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2168	2168	2168
5°	2166	2160	2174
10°	2157	2157	2173
15°	2137	2147	2169
20°	2109	2130	2163
25°	2070	2109	2150
30°	2023	2085	2132
35°	1979	2051	2115
40°	1911	2016	2090
45°	1849	1976	2068
50°	1778	1939	2043
55°	1698	1903	2023
60°	1619	1874	2019
65°	1517	1841	2031
70°	1404	1851	2086
75°	1257	1886	2204
80°	1016	1998	2156
85°	764	1754	1709



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.5	3.3
10°-20°	435.8	9.5
20°-30°	655.1	14.3
30°-40°	780.4	17.0
40°-50°	798.7	17.4
50°-60°	719.0	15.7
60°-70°	564.7	12.3
70°-80°	366.5	8.0
80°-90°	113.3	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°	1243.5	27.1
0°-40°	2023.9	44.1
0°-60°	3541.6	77.2
0°-90°	4586.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4586.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1611	1611	1611	1611	1611	
5°	1604	1607	1600	1608	1610	152
15°	1534	1538	1541	1554	1557	433
25°	1394	1406	1420	1444	1448	642
35°	1205	1219	1248	1279	1288	752
45°	972	995	1039	1078	1087	749
55°	724	756	811	854	862	649
65°	476	513	578	626	638	474
75°	242	288	363	412	424	256
85°	50	92	114	111	111	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1611.1	1611.1	1611.1	1611.1	1611.1
2.5°	1612.6	1612.6	1605.3	1612.6	1614.1
5°	1603.9	1606.8	1599.5	1608.2	1609.7
7.5°	1595.1	1595.1	1590.8	1599.5	1601.0
10°	1579.1	1580.6	1579.1	1589.3	1590.8
12.5°	1558.7	1561.6	1563.1	1573.3	1574.7
15°	1533.9	1538.3	1541.2	1554.3	1557.2
17.5°	1506.3	1510.6	1517.9	1532.5	1535.4
20°	1472.8	1478.6	1487.3	1506.3	1510.6
22.5°	1436.3	1442.2	1456.7	1474.2	1481.5
25°	1394.1	1405.7	1420.3	1443.6	1448.0
27.5°	1351.8	1362.0	1381.0	1405.7	1411.6
30°	1302.3	1318.3	1341.7	1366.4	1372.2
32.5°	1254.2	1270.3	1297.9	1324.2	1331.5
35°	1204.7	1219.3	1248.4	1279.0	1287.8
37.5°	1147.9	1166.8	1198.9	1229.5	1238.2
40°	1088.2	1111.5	1147.9	1180.0	1190.2
42.5°	1031.4	1056.1	1092.6	1127.5	1139.2
45°	971.6	994.9	1038.7	1078.0	1086.7
47.5°	910.5	936.7	983.3	1022.6	1037.2
50°	849.3	877.0	926.5	967.3	976.0
52.5°	788.1	817.2	869.7	913.4	917.7
55°	724.0	756.0	811.4	853.6	862.4
57.5°	665.7	693.4	753.1	796.8	807.0
60°	601.6	632.2	696.3	737.1	750.2
62.5°	540.4	572.5	639.5	680.3	691.9
65°	476.4	512.8	578.3	626.4	638.0
67.5°	421.0	456.0	525.9	572.5	584.2
70°	356.9	396.2	470.5	518.6	530.3
72.5°	301.5	342.3	416.6	463.2	480.7
75°	241.8	288.4	362.7	412.3	423.9
77.5°	183.5	237.4	313.2	351.1	351.1
80°	131.1	187.9	257.8	275.3	278.2
82.5°	85.9	141.3	190.8	189.4	189.4
85°	49.5	91.8	113.6	110.7	110.7
87.5°	18.9	37.9	40.8	40.8	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)