

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: P276407

Luminaire Tested: **24CZ2-50HE-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: P276407
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-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: 3886.8 lumens
Efficiency: N/A
Efficacy: 106.4 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

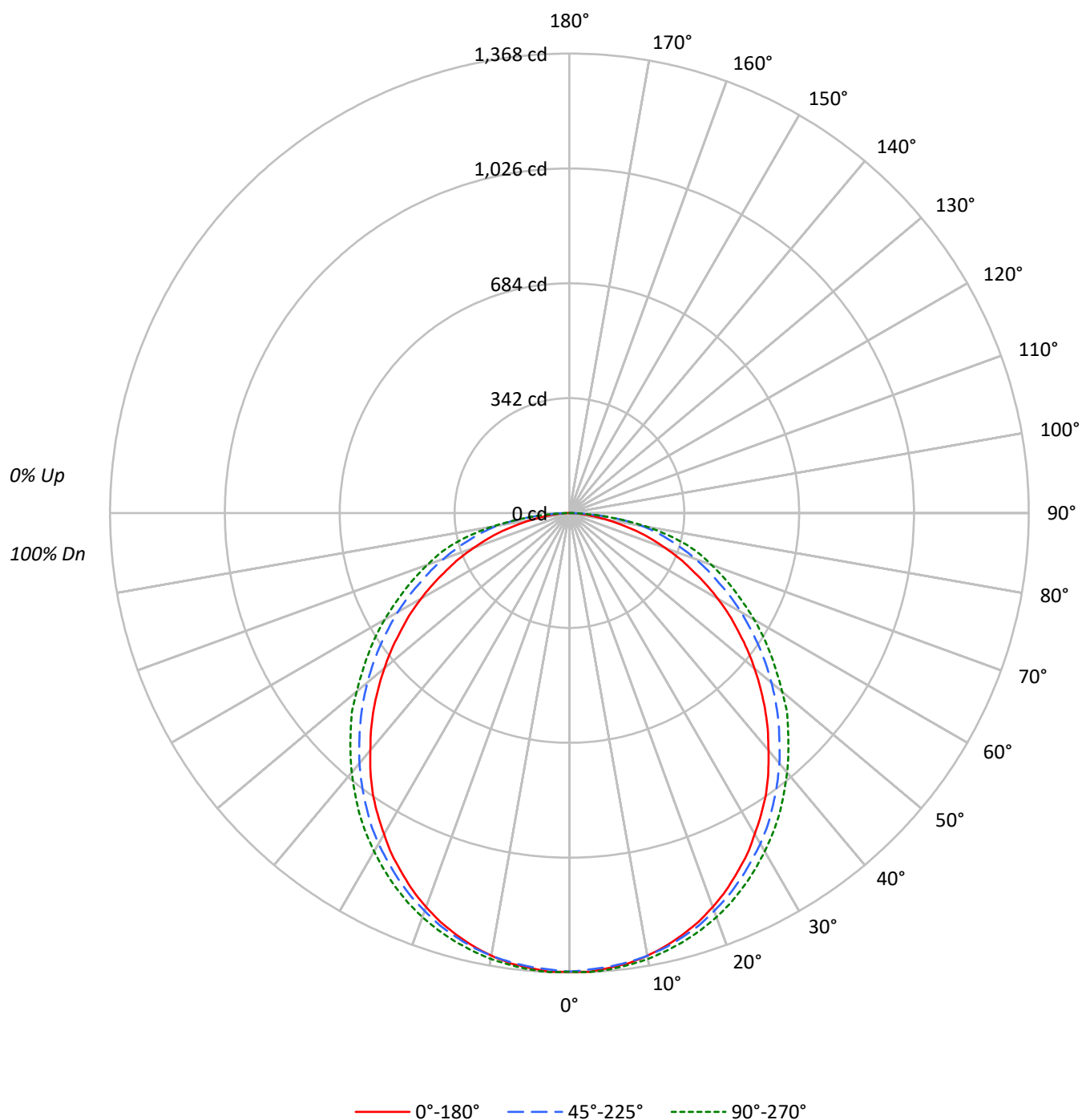
Input Watts (W): 36.533376
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	108	103	99	95	106	101	97	93		97	93	90		93	90	88		89	87	85
2	98	90	83	77	96	88	81	76		84	79	74		81	76	72		78	74	71
3	89	79	70	64	87	77	69	63		74	67	62		71	66	61		69	64	60
4	82	70	61	54	80	68	60	54		66	59	53		63	57	52		61	56	51
5	75	62	53	46	73	61	53	46		59	51	46		57	50	45		55	49	45
6	70	56	47	40	68	55	47	40		53	46	40		52	45	40		50	44	39
7	64	51	42	36	63	50	42	36		48	41	35		47	40	35		46	39	35
8	60	46	38	32	58	46	37	32		44	37	32		43	36	31		42	36	31
9	56	43	34	29	55	42	34	29		41	34	28		40	33	28		39	33	28
10	53	39	31	26	51	39	31	26		38	31	26		37	30	26		36	30	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1837	1837	1837
5°	1836	1831	1843
10°	1828	1828	1842
15°	1811	1819	1838
20°	1787	1805	1833
25°	1754	1787	1822
30°	1715	1766	1807
35°	1677	1738	1793
40°	1620	1709	1772
45°	1567	1675	1752
50°	1507	1644	1732
55°	1439	1613	1715
60°	1372	1588	1711
65°	1285	1560	1721
70°	1190	1569	1768
75°	1065	1598	1868
80°	861	1693	1827
85°	648	1487	1448



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.3	3.3
10°-20°	369.4	9.5
20°-30°	555.2	14.3
30°-40°	661.4	17.0
40°-50°	676.9	17.4
50°-60°	609.4	15.7
60°-70°	478.6	12.3
70°-80°	310.6	8.0
80°-90°	96.1	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°	1053.9	27.1
0°-40°	1715.2	44.1
0°-60°	3001.5	77.2
0°-90°	3886.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3886.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1365	1365	1365	1365	1365	
5°	1359	1362	1356	1363	1364	129
15°	1300	1304	1306	1317	1320	367
25°	1182	1191	1204	1224	1227	544
35°	1021	1033	1058	1084	1091	637
45°	824	843	880	914	921	635
55°	614	641	688	724	731	550
65°	404	435	490	531	541	402
75°	205	244	307	349	359	217
85°	42	78	96	94	94	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1365.4	1365.4	1365.4	1365.4	1365.4
2.5°	1366.7	1366.7	1360.5	1366.7	1367.9
5°	1359.3	1361.7	1355.6	1363.0	1364.2
7.5°	1351.9	1351.9	1348.2	1355.6	1356.8
10°	1338.3	1339.5	1338.3	1346.9	1348.2
12.5°	1321.0	1323.5	1324.7	1333.3	1334.6
15°	1300.0	1303.7	1306.2	1317.3	1319.8
17.5°	1276.5	1280.3	1286.4	1298.8	1301.2
20°	1248.2	1253.1	1260.5	1276.5	1280.3
22.5°	1217.3	1222.2	1234.6	1249.4	1255.6
25°	1181.5	1191.4	1203.7	1223.5	1227.2
27.5°	1145.7	1154.3	1170.4	1191.4	1196.3
30°	1103.7	1117.3	1137.0	1158.0	1163.0
32.5°	1063.0	1076.5	1100.0	1122.2	1128.4
35°	1021.0	1033.3	1058.0	1084.0	1091.4
37.5°	972.8	988.9	1016.1	1042.0	1049.4
40°	922.2	942.0	972.8	1000.0	1008.6
42.5°	874.1	895.1	925.9	955.6	965.4
45°	823.5	843.2	880.3	913.6	921.0
47.5°	771.6	793.8	833.3	866.7	879.0
50°	719.8	743.2	785.2	819.8	827.2
52.5°	667.9	692.6	737.0	774.1	777.8
55°	613.6	640.7	687.7	723.5	730.9
57.5°	564.2	587.7	638.3	675.3	684.0
60°	509.9	535.8	590.1	624.7	635.8
62.5°	458.0	485.2	542.0	576.5	586.4
65°	403.7	434.6	490.1	530.9	540.7
67.5°	356.8	386.4	445.7	485.2	495.1
70°	302.5	335.8	398.8	439.5	449.4
72.5°	255.6	290.1	353.1	392.6	407.4
75°	204.9	244.4	307.4	349.4	359.3
77.5°	155.6	201.2	265.4	297.5	297.5
80°	111.1	159.3	218.5	233.3	235.8
82.5°	72.8	119.8	161.7	160.5	160.5
85°	42.0	77.8	96.3	93.8	93.8
87.5°	16.0	32.1	34.6	34.6	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)