

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: P276448

Luminaire Tested: **24CZ2-40-S-UNV-L93050-W2A1-U-3500K**

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: P276448
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: 24CZ2-40-S-UNV-L93050-W2A1-U-3500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (168) 90 CRI LEDS TUNED TO 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3420.1 lumens
Efficiency: N/A
Efficacy: 110.4 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

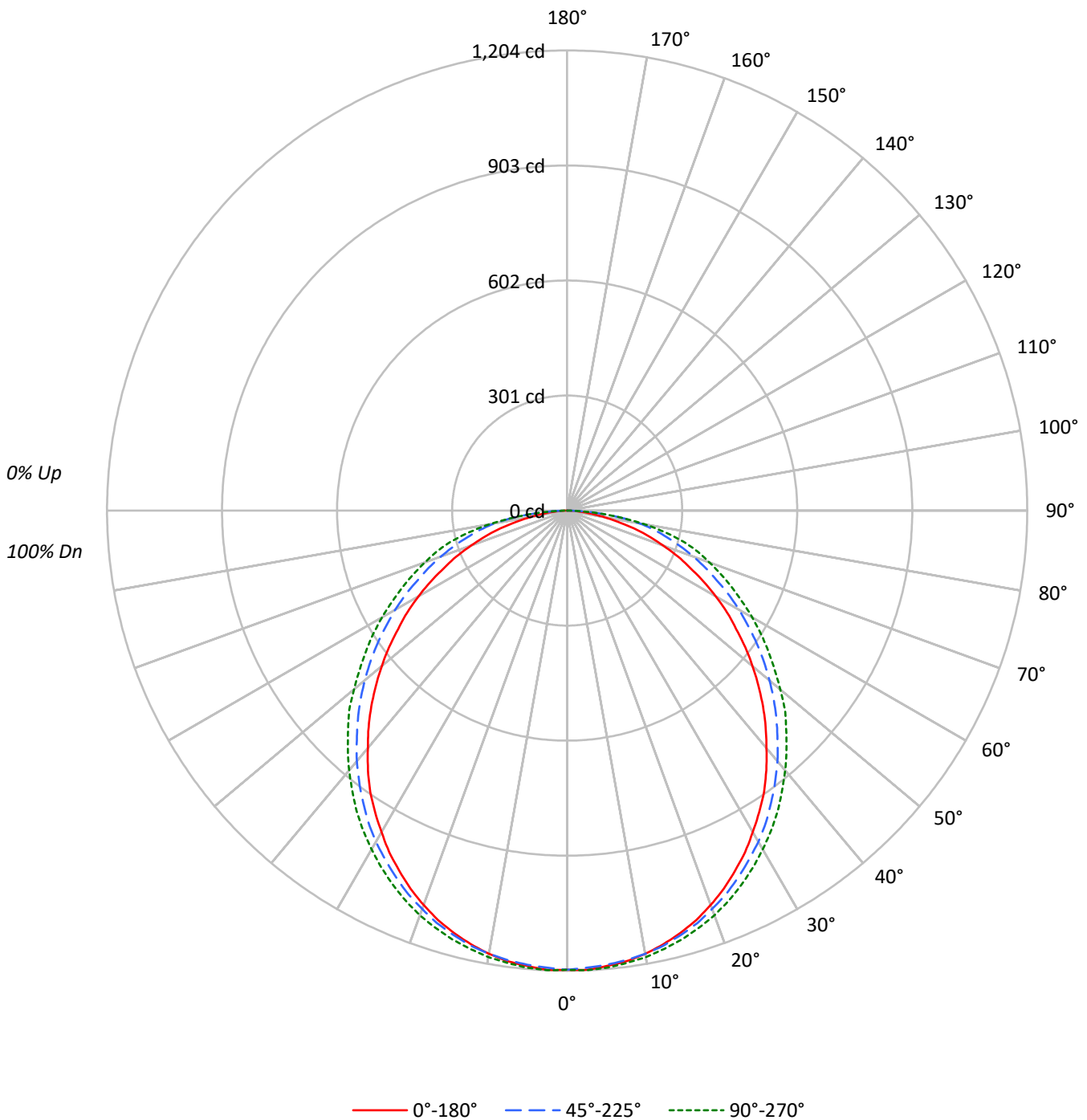
Input Watts (W): 30.988809
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1617	1617	1617
5°	1615	1611	1621
10°	1609	1609	1621
15°	1593	1601	1618
20°	1573	1588	1613
25°	1543	1572	1603
30°	1509	1554	1590
35°	1476	1529	1577
40°	1425	1504	1559
45°	1379	1474	1542
50°	1326	1446	1524
55°	1266	1419	1509
60°	1207	1397	1506
65°	1131	1373	1515
70°	1047	1380	1555
75°	937	1406	1643
80°	758	1490	1608
85°	570	1308	1275



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.7	3.3
10°-20°	325.0	9.5
20°-30°	488.6	14.3
30°-40°	582.0	17.0
40°-50°	595.6	17.4
50°-60°	536.2	15.7
60°-70°	421.1	12.3
70°-80°	273.3	8.0
80°-90°	84.5	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°	927.3	27.1
0°-40°	1509.3	44.1
0°-60°	2641.2	77.2
0°-90°	3420.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3420.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1202	1202	1202	1202	1202	
5°	1196	1198	1193	1199	1200	114
15°	1144	1147	1149	1159	1161	323
25°	1040	1048	1059	1077	1080	479
35°	898	909	931	954	960	560
45°	725	742	775	804	810	559
55°	540	564	605	637	643	484
65°	355	382	431	467	476	354
75°	180	215	270	307	316	191
85°	37	68	85	83	83	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1201.5	1201.5	1201.5	1201.5	1201.5
2.5°	1202.6	1202.6	1197.2	1202.6	1203.7
5°	1196.1	1198.3	1192.8	1199.3	1200.4
7.5°	1189.6	1189.6	1186.3	1192.8	1193.9
10°	1177.6	1178.7	1177.6	1185.2	1186.3
12.5°	1162.4	1164.6	1165.7	1173.3	1174.4
15°	1143.9	1147.2	1149.4	1159.1	1161.3
17.5°	1123.3	1126.6	1132.0	1142.9	1145.0
20°	1098.3	1102.7	1109.2	1123.3	1126.6
22.5°	1071.2	1075.5	1086.4	1099.4	1104.8
25°	1039.6	1048.3	1059.2	1076.6	1079.8
27.5°	1008.1	1015.7	1029.9	1048.3	1052.7
30°	971.2	983.2	1000.5	1019.0	1023.4
32.5°	935.4	947.3	967.9	987.5	992.9
35°	898.4	909.3	931.0	953.8	960.3
37.5°	856.1	870.2	894.1	916.9	923.4
40°	811.5	828.9	856.1	880.0	887.6
42.5°	769.1	787.6	814.8	840.8	849.5
45°	724.6	742.0	774.6	803.9	810.4
47.5°	679.0	698.5	733.3	762.6	773.5
50°	633.3	654.0	690.9	721.3	727.9
52.5°	587.7	609.4	648.6	681.1	684.4
55°	539.9	563.8	605.1	636.6	643.1
57.5°	496.5	517.1	561.6	594.2	601.8
60°	448.7	471.5	519.3	549.7	559.5
62.5°	403.0	426.9	476.9	507.3	516.0
65°	355.2	382.4	431.3	467.1	475.8
67.5°	314.0	340.0	392.2	426.9	435.6
70°	266.2	295.5	350.9	386.7	395.4
72.5°	224.9	255.3	310.7	345.5	358.5
75°	180.3	215.1	270.5	307.4	316.1
77.5°	136.9	177.1	233.6	261.8	261.8
80°	97.8	140.1	192.3	205.3	207.5
82.5°	64.1	105.4	142.3	141.2	141.2
85°	36.9	68.4	84.7	82.6	82.6
87.5°	14.1	28.2	30.4	30.4	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)