

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: P276611

Luminaire Tested: **24CZ2-35HE-S-UNV-L92765-W2A1-U-5000K**

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: P276611
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: 24CZ2-35HE-S-UNV-L92765-W2A1-U-5000K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3233.5 lumens
Efficiency: N/A
Efficacy: 130.7 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

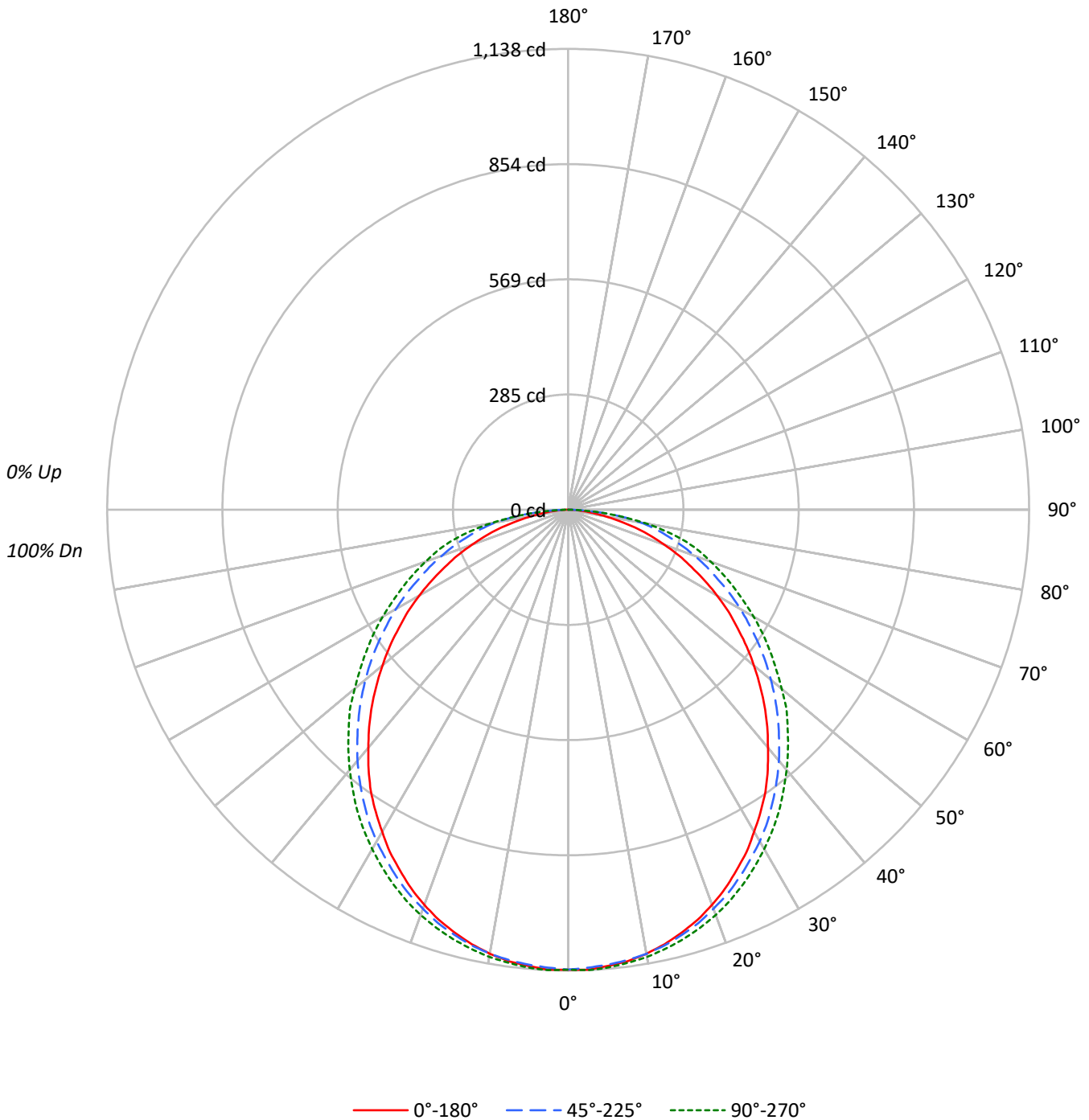
Input Watts (W): 24.738
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1528	1528	1528
5°	1527	1523	1533
10°	1521	1521	1532
15°	1506	1514	1529
20°	1487	1501	1525
25°	1459	1487	1516
30°	1427	1470	1503
35°	1395	1446	1491
40°	1348	1421	1474
45°	1304	1393	1458
50°	1253	1367	1440
55°	1198	1342	1426
60°	1142	1321	1423
65°	1069	1298	1432
70°	990	1305	1471
75°	886	1329	1554
80°	716	1409	1520
85°	539	1237	1206



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.5	3.3
10°-20°	307.3	9.5
20°-30°	461.9	14.3
30°-40°	550.2	17.0
40°-50°	563.1	17.4
50°-60°	507.0	15.7
60°-70°	398.1	12.3
70°-80°	258.4	8.0
80°-90°	79.9	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°	876.7	27.1
0°-40°	1426.9	44.1
0°-60°	2497.0	77.2
0°-90°	3233.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3233.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1136	1136	1136	1136	1136	
5°	1131	1133	1128	1134	1135	107
15°	1082	1085	1087	1096	1098	305
25°	983	991	1001	1018	1021	453
35°	849	860	880	902	908	530
45°	685	702	732	760	766	528
55°	510	533	572	602	608	458
65°	336	362	408	442	450	334
75°	170	203	256	291	299	180
85°	35	65	80	78	78	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1135.9	1135.9	1135.9	1135.9	<i>1135.9</i>
2.5°	<i>1137.0</i>	<i>1137.0</i>	<i>1131.8</i>	<i>1137.0</i>	<i>1138.0</i>
5°	1130.8	1132.9	1127.7	1133.9	<i>1134.9</i>
7.5°	1124.6	1124.6	1121.6	1127.7	<i>1128.7</i>
10°	1113.3	1114.4	1113.3	1120.5	<i>1121.6</i>
12.5°	1099.0	1101.0	1102.0	1109.2	<i>1110.3</i>
15°	1081.5	1084.6	1086.6	1095.9	<i>1097.9</i>
17.5°	1062.0	1065.1	1070.2	1080.5	<i>1082.5</i>
20°	1038.4	1042.5	1048.6	1062.0	<i>1065.1</i>
22.5°	1012.7	1016.8	1027.1	1039.4	<i>1044.5</i>
25°	982.9	991.1	1001.4	1017.8	<i>1020.9</i>
27.5°	953.1	960.3	973.7	991.1	<i>995.2</i>
30°	918.2	929.5	945.9	963.4	<i>967.5</i>
32.5°	884.3	895.6	915.1	933.6	<i>938.7</i>
35°	849.4	859.7	880.2	901.8	<i>907.9</i>
37.5°	809.3	822.7	845.3	866.8	<i>873.0</i>
40°	767.2	783.7	809.3	831.9	<i>839.1</i>
42.5°	727.2	744.6	770.3	795.0	<i>803.2</i>
45°	685.1	701.5	732.3	760.0	<i>766.2</i>
47.5°	641.9	660.4	693.3	721.0	<i>731.3</i>
50°	598.8	618.3	653.2	682.0	<i>688.1</i>
52.5°	555.6	576.2	613.2	644.0	<i>647.1</i>
55°	510.5	533.0	572.1	601.9	<i>608.0</i>
57.5°	469.4	488.9	531.0	561.8	<i>569.0</i>
60°	424.2	445.7	490.9	519.7	<i>528.9</i>
62.5°	381.0	403.6	450.9	479.6	<i>487.9</i>
65°	335.9	361.5	407.7	441.6	<i>449.9</i>
67.5°	296.8	321.5	370.8	403.6	<i>411.9</i>
70°	251.6	279.4	331.7	365.6	<i>373.9</i>
72.5°	212.6	241.4	293.7	326.6	<i>338.9</i>
75°	170.5	203.4	255.7	290.7	<i>298.9</i>
77.5°	129.4	167.4	220.8	247.5	<i>247.5</i>
80°	92.4	132.5	181.8	194.1	<i>196.2</i>
82.5°	60.6	99.6	134.5	133.5	<i>133.5</i>
85°	34.9	64.7	80.1	78.1	<i>78.1</i>
87.5°	13.4	26.7	28.8	28.8	<i>27.7</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)