

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: P276393

Luminaire Tested: **24CZ2-35HE-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: P276393
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-L93050-W2A1-U-3500K
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS
Light Source: (336) 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: 2973.2 lumens
Efficiency: N/A
Efficacy: 120.7 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

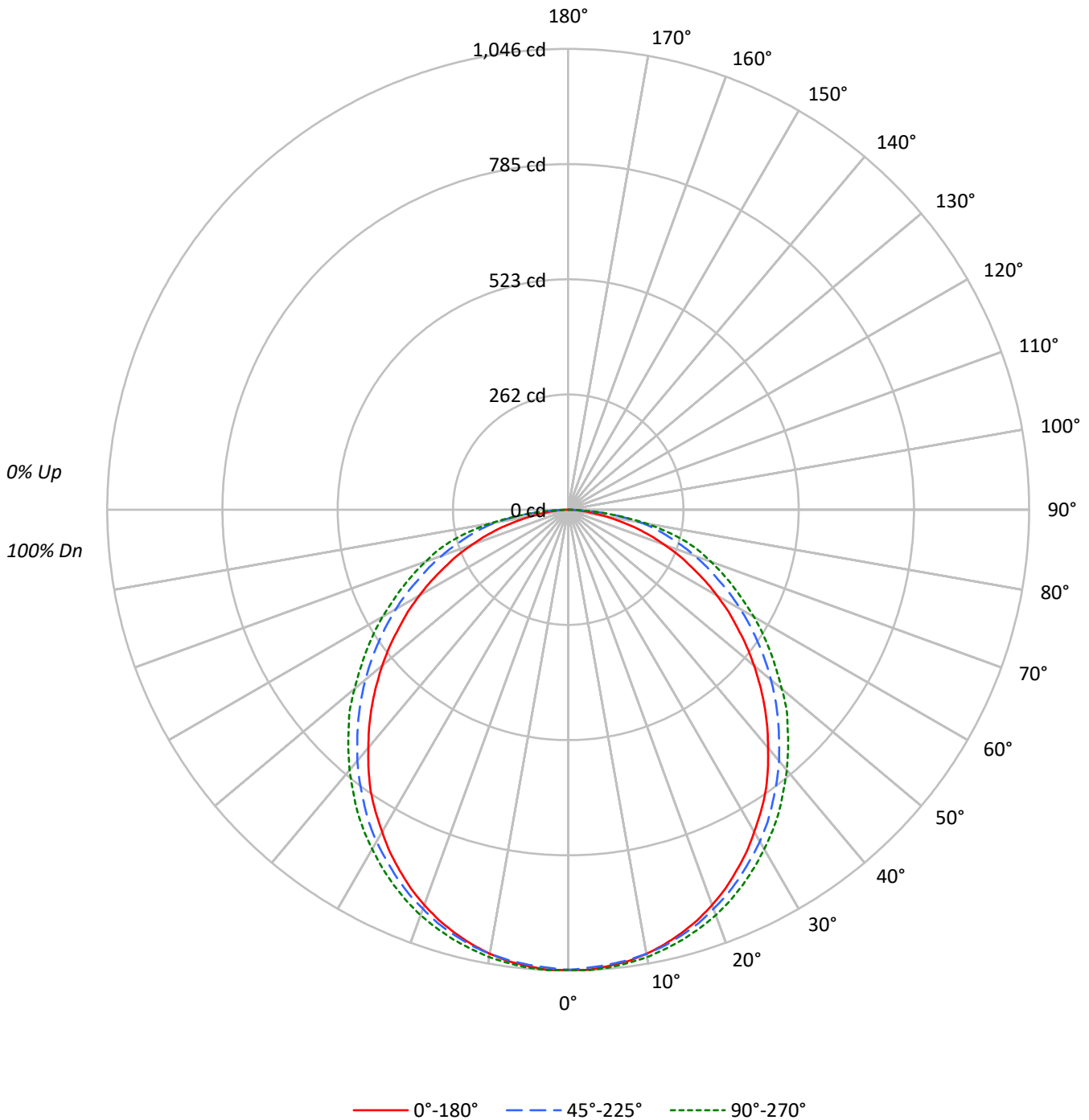
Input Watts (W): 24.63942
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1405	1405	1405
5°	1404	1400	1410
10°	1399	1399	1409
15°	1385	1392	1406
20°	1367	1381	1402
25°	1342	1367	1394
30°	1312	1351	1382
35°	1283	1329	1371
40°	1239	1307	1355
45°	1199	1281	1341
50°	1153	1257	1324
55°	1101	1234	1312
60°	1049	1215	1309
65°	983	1194	1317
70°	910	1200	1352
75°	815	1223	1429
80°	659	1296	1398
85°	496	1138	1108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.9	3.3
10°-20°	282.5	9.5
20°-30°	424.7	14.3
30°-40°	505.9	17.0
40°-50°	517.8	17.4
50°-60°	466.2	15.7
60°-70°	366.1	12.3
70°-80°	237.6	8.0
80°-90°	73.5	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°	806.2	27.1
0°-40°	1312.1	44.1
0°-60°	2296.0	77.2
0°-90°	2973.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2973.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1044	1044	1044	1044	1044	
5°	1040	1042	1037	1043	1044	99
15°	994	997	999	1008	1010	280
25°	904	911	921	936	939	416
35°	781	790	809	829	835	487
45°	630	645	673	699	704	486
55°	469	490	526	553	559	421
65°	309	332	375	406	414	307
75°	157	187	235	267	275	166
85°	32	60	74	72	72	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1044.5	1044.5	1044.5	1044.5	1044.5
2.5°	1045.4	1045.4	1040.7	1045.4	1046.4
5°	1039.8	1041.7	1036.9	1042.6	1043.6
7.5°	1034.1	1034.1	1031.3	1036.9	1037.9
10°	1023.7	1024.7	1023.7	1030.3	1031.3
12.5°	1010.5	1012.4	1013.3	1019.9	1020.9
15°	994.4	997.3	999.2	1007.7	1009.6
17.5°	976.5	979.3	984.1	993.5	995.4
20°	954.8	958.6	964.2	976.5	979.3
22.5°	931.2	935.0	944.4	955.7	960.4
25°	903.8	911.3	920.8	935.9	938.7
27.5°	876.4	883.0	895.3	911.3	915.1
30°	844.3	854.7	869.8	885.8	889.6
32.5°	813.1	823.5	841.5	858.5	863.2
35°	781.0	790.5	809.3	829.2	834.8
37.5°	744.2	756.5	777.2	797.1	802.7
40°	705.5	720.6	744.2	765.0	771.6
42.5°	668.6	684.7	708.3	731.0	738.5
45°	629.9	645.0	673.4	698.9	704.5
47.5°	590.2	607.2	637.5	663.0	672.4
50°	550.6	568.5	600.6	627.1	632.7
52.5°	510.9	529.8	563.8	592.1	595.0
55°	469.4	490.1	526.0	553.4	559.1
57.5°	431.6	449.5	488.3	516.6	523.2
60°	390.0	409.9	451.4	477.9	486.4
62.5°	350.4	371.1	414.6	441.0	448.6
65°	308.8	332.4	374.9	406.1	413.6
67.5°	272.9	295.6	340.9	371.1	378.7
70°	231.4	256.9	305.0	336.2	343.8
72.5°	195.5	221.9	270.1	300.3	311.7
75°	156.8	187.0	235.2	267.3	274.8
77.5°	119.0	153.9	203.0	227.6	227.6
80°	85.0	121.8	167.2	178.5	180.4
82.5°	55.7	91.6	123.7	122.8	122.8
85°	32.1	59.5	73.7	71.8	71.8
87.5°	12.3	24.6	26.4	26.4	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)