

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: P276444

Luminaire Tested: **24CZ2-35-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: P276444  
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: 24CZ2-35-S-UNV-L93050-W2A1-U-4000K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 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: 3245.7 lumens  
Efficiency: N/A  
Efficacy: 121.5 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

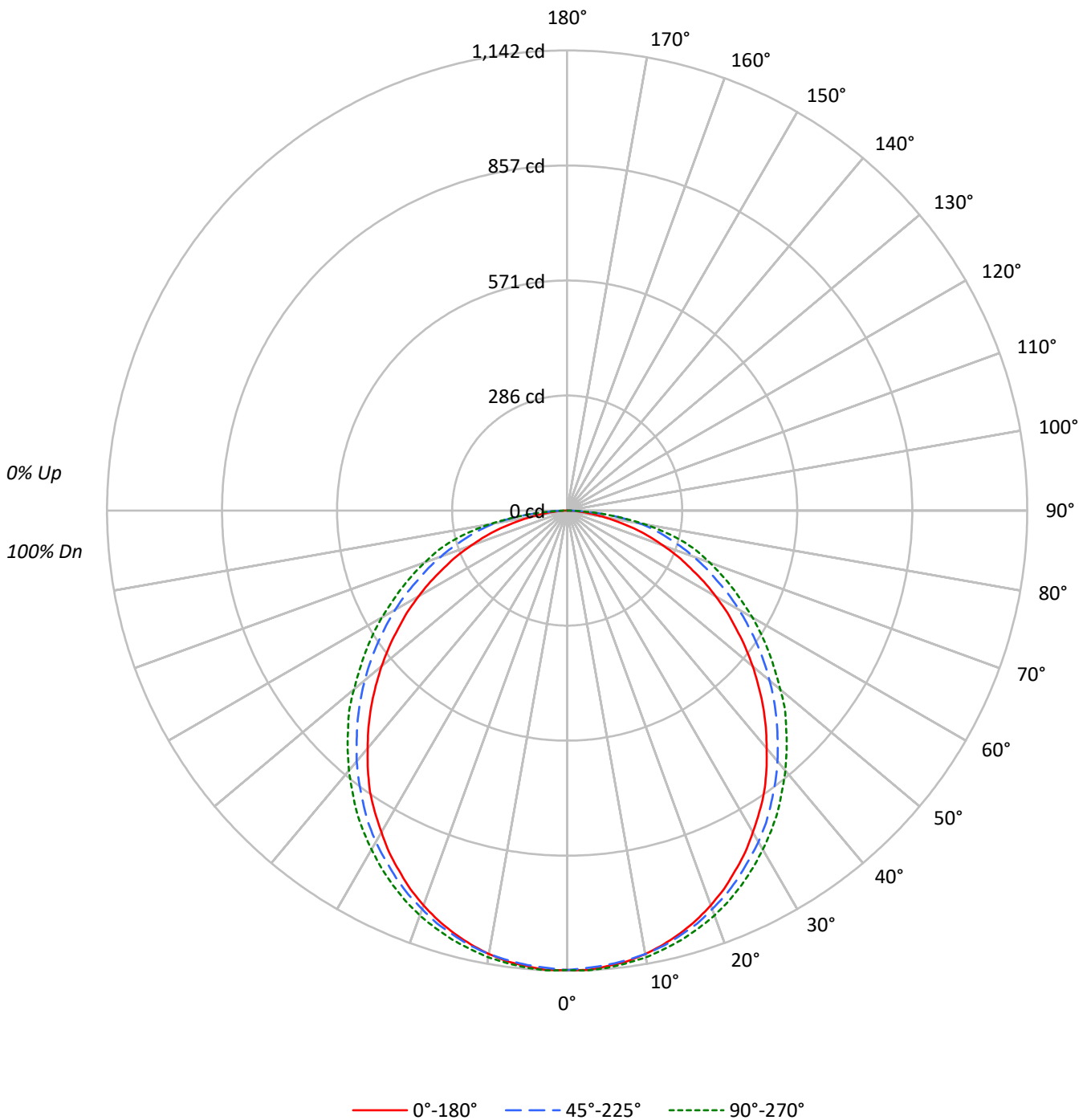
Input Watts (W): 26.71704  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1534	1534	1534
5°	1533	1529	1539
10°	1527	1527	1538
15°	1512	1519	1535
20°	1492	1507	1531
25°	1465	1492	1521
30°	1432	1475	1509
35°	1400	1451	1497
40°	1353	1427	1479
45°	1308	1399	1463
50°	1258	1373	1446
55°	1202	1347	1432
60°	1146	1326	1429
65°	1073	1303	1438
70°	994	1310	1476
75°	889	1334	1560
80°	719	1414	1526
85°	542	1241	1210



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.9	3.3
10°-20°	308.4	9.5
20°-30°	463.7	14.3
30°-40°	552.3	17.0
40°-50°	565.2	17.4
50°-60°	508.9	15.7
60°-70°	399.6	12.3
70°-80°	259.4	8.0
80°-90°	80.2	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°	880.0	27.1
0°-40°	1432.3	44.1
0°-60°	2506.5	77.2
0°-90°	3245.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3245.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1140	1140	1140	1140	1140	
5°	1135	1137	1132	1138	1139	108
15°	1086	1089	1091	1100	1102	306
25°	987	995	1005	1022	1025	455
35°	853	863	884	905	911	532
45°	688	704	735	763	769	530
55°	512	535	574	604	610	459
65°	337	363	409	443	452	336
75°	171	204	257	292	300	181
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°	1140.2	1140.2	1140.2	1140.2	1140.2
2.5°	1141.3	1141.3	1136.1	1141.3	1142.3
5°	1135.1	1137.1	1132.0	1138.2	1139.2
7.5°	1128.9	1128.9	1125.8	1132.0	1133.0
10°	1117.6	1118.6	1117.6	1124.8	1125.8
12.5°	1103.1	1105.2	1106.2	1113.4	1114.5
15°	1085.6	1088.7	1090.8	1100.0	1102.1
17.5°	1066.0	1069.1	1074.3	1084.6	1086.6
20°	1042.3	1046.4	1052.6	1066.0	1069.1
22.5°	1016.5	1020.6	1031.0	1043.3	1048.5
25°	986.6	994.9	1005.2	1021.7	1024.8
27.5°	956.7	963.9	977.3	994.9	999.0
30°	921.7	933.0	949.5	967.0	971.2
32.5°	887.7	899.0	918.6	937.1	942.3
35°	852.6	862.9	883.5	905.2	911.4
37.5°	812.4	825.8	848.5	870.1	876.3
40°	770.1	786.6	812.4	835.1	842.3
42.5°	729.9	747.4	773.2	798.0	806.2
45°	687.6	704.1	735.1	762.9	769.1
47.5°	644.3	662.9	695.9	723.7	734.0
50°	601.0	620.6	655.7	684.6	690.7
52.5°	557.7	578.4	615.5	646.4	649.5
55°	512.4	535.1	574.2	604.1	610.3
57.5°	471.1	490.7	533.0	563.9	571.2
60°	425.8	447.4	492.8	521.7	530.9
62.5°	382.5	405.2	452.6	481.5	489.7
65°	337.1	362.9	409.3	443.3	451.6
67.5°	297.9	322.7	372.2	405.2	413.4
70°	252.6	280.4	333.0	367.0	375.3
72.5°	213.4	242.3	294.9	327.8	340.2
75°	171.1	204.1	256.7	291.8	300.0
77.5°	129.9	168.0	221.7	248.5	248.5
80°	92.8	133.0	182.5	194.9	196.9
82.5°	60.8	100.0	135.1	134.0	134.0
85°	35.1	65.0	80.4	78.4	78.4
87.5°	13.4	26.8	28.9	28.9	27.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)