

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: P276715

Luminaire Tested: **24CZ2-45-S-UNV-L92765-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: P276715  
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: 24CZ2-45-S-UNV-L92765-W2A1-U-3000K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 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: 3670.8 lumens  
Efficiency: N/A  
Efficacy: 106.1 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

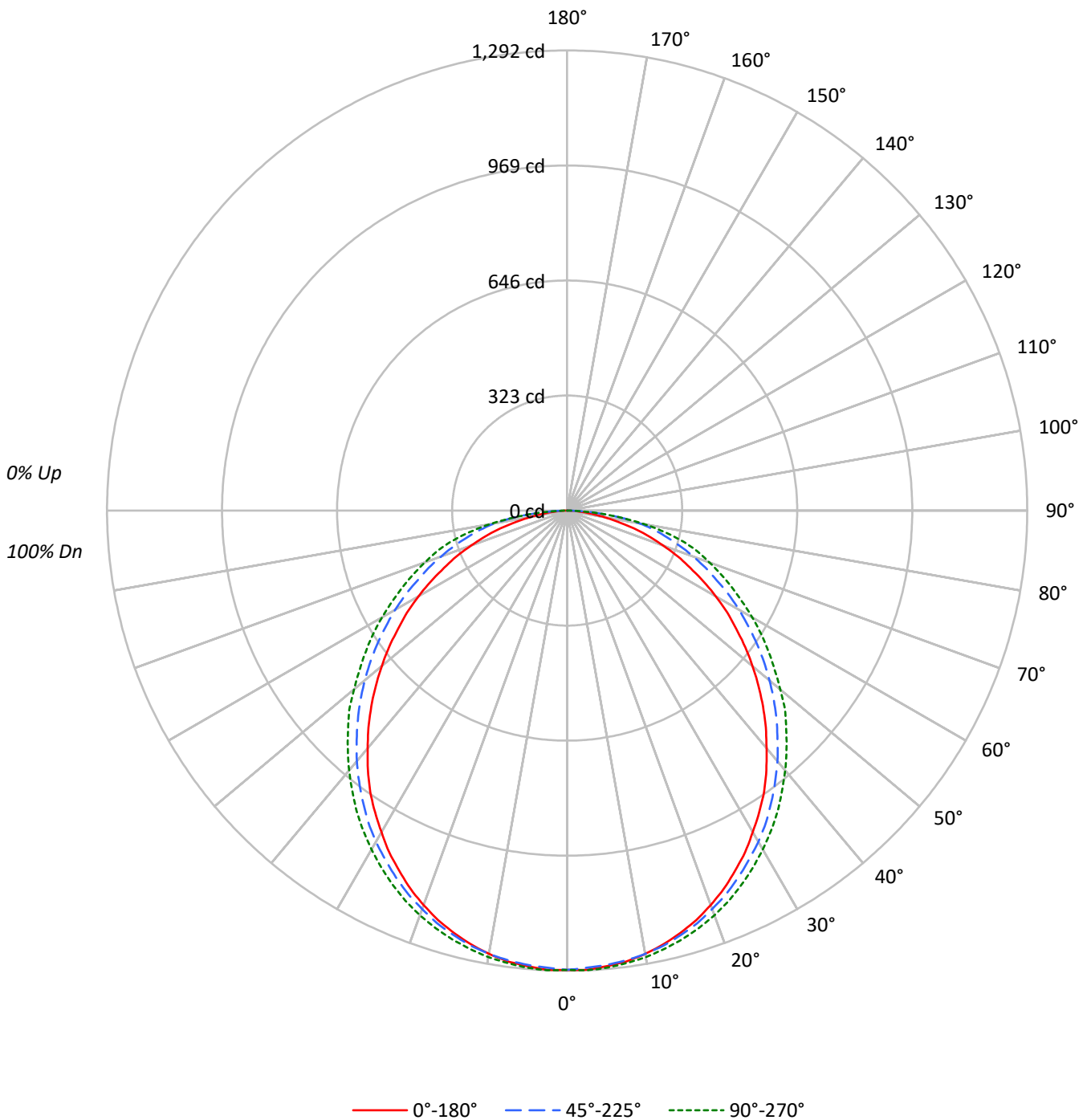
Input Watts (W): 34.596  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1735	1735	1735
5°	1734	1729	1740
10°	1727	1727	1740
15°	1710	1718	1736
20°	1688	1705	1731
25°	1657	1688	1721
30°	1620	1668	1707
35°	1584	1641	1693
40°	1530	1614	1673
45°	1480	1582	1655
50°	1423	1552	1635
55°	1359	1524	1619
60°	1296	1500	1616
65°	1214	1474	1626
70°	1124	1482	1670
75°	1006	1509	1764
80°	813	1599	1726
85°	611	1403	1368



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.1	3.3
10°-20°	348.8	9.5
20°-30°	524.4	14.3
30°-40°	624.6	17.0
40°-50°	639.3	17.4
50°-60°	575.5	15.7
60°-70°	452.0	12.3
70°-80°	293.4	8.0
80°-90°	90.7	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°	995.3	27.1
0°-40°	1619.9	44.1
0°-60°	2834.8	77.2
0°-90°	3670.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3670.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1290	1290	1290	1290	1290	
5°	1284	1286	1280	1287	1288	122
15°	1228	1231	1234	1244	1246	346
25°	1116	1125	1137	1156	1159	514
35°	964	976	999	1024	1031	602
45°	778	796	831	863	870	600
55°	580	605	650	683	690	520
65°	381	410	463	501	511	380
75°	194	231	290	330	339	205
85°	40	74	91	89	89	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1289.6	1289.6	1289.6	1289.6	1289.6
2.5°	1290.7	1290.7	1284.9	1290.7	1291.9
5°	1283.8	1286.1	1280.3	1287.3	1288.4
7.5°	1276.8	1276.8	1273.3	1280.3	1281.4
10°	1263.9	1265.1	1263.9	1272.1	1273.3
12.5°	1247.6	1249.9	1251.1	1259.3	1260.4
15°	1227.8	1231.3	1233.6	1244.1	1246.4
17.5°	1205.6	1209.1	1215.0	1226.6	1229.0
20°	1178.8	1183.5	1190.5	1205.6	1209.1
22.5°	1149.7	1154.3	1166.0	1180.0	1185.8
25°	1115.9	1125.2	1136.8	1155.5	1159.0
27.5°	1082.0	1090.2	1105.4	1125.2	1129.8
30°	1042.4	1055.2	1073.9	1093.7	1098.4
32.5°	1003.9	1016.7	1038.9	1059.9	1065.7
35°	964.3	975.9	999.3	1023.7	1030.7
37.5°	918.8	934.0	959.6	984.1	991.1
40°	871.0	889.6	918.8	944.5	952.6
42.5°	825.5	845.3	874.5	902.5	911.8
45°	777.7	796.4	831.3	862.8	869.8
47.5°	728.7	749.7	787.0	818.5	830.2
50°	679.8	701.9	741.6	774.2	781.2
52.5°	630.8	654.1	696.1	731.1	734.6
55°	579.5	605.1	649.5	683.3	690.3
57.5°	532.9	555.0	602.8	637.8	646.0
60°	481.6	506.0	557.3	590.0	600.5
62.5°	432.6	458.2	511.9	544.5	553.8
65°	381.3	410.4	462.9	501.4	510.7
67.5°	337.0	365.0	420.9	458.2	467.6
70°	285.7	317.1	376.6	415.1	424.4
72.5°	241.4	274.0	333.5	370.8	384.8
75°	193.6	230.9	290.3	330.0	339.3
77.5°	146.9	190.1	250.7	281.0	281.0
80°	104.9	150.4	206.4	220.4	222.7
82.5°	68.8	113.1	152.7	151.6	151.6
85°	39.6	73.5	90.9	88.6	88.6
87.5°	15.2	30.3	32.6	32.6	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)