

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: P276455

Luminaire Tested: **24CZ2-45-S-UNV-L93050-W2A1-U-4500K**

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: P276455  
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-L93050-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 90 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4207.5 lumens  
Efficiency: N/A  
Efficacy: 115.5 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

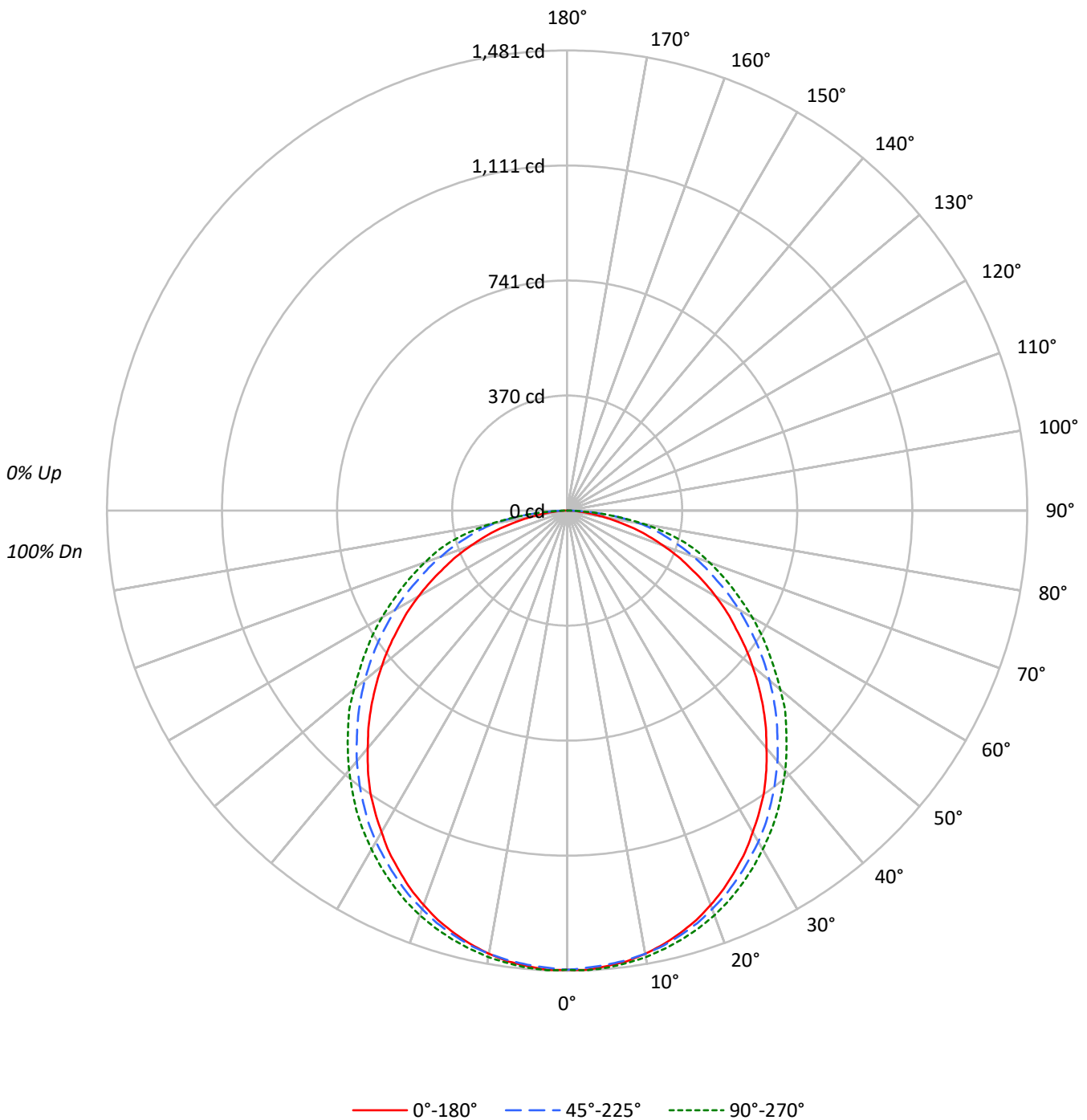
Input Watts (W): 36.436656  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1989	1989	1989
5°	1987	1982	1995
10°	1979	1979	1994
15°	1960	1970	1990
20°	1935	1954	1984
25°	1899	1934	1972
30°	1856	1912	1956
35°	1815	1881	1940
40°	1753	1850	1918
45°	1696	1813	1897
50°	1631	1779	1874
55°	1558	1746	1856
60°	1485	1719	1852
65°	1391	1689	1864
70°	1288	1698	1914
75°	1154	1730	2022
80°	932	1833	1978
85°	701	1609	1568



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.9	3.3
10°-20°	399.8	9.5
20°-30°	601.1	14.3
30°-40°	715.9	17.0
40°-50°	732.7	17.4
50°-60°	659.7	15.7
60°-70°	518.1	12.3
70°-80°	336.2	8.0
80°-90°	104.0	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°	1140.8	27.1
0°-40°	1856.8	44.1
0°-60°	3249.2	77.2
0°-90°	4207.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4207.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1478	1478	1478	1478	1478	
5°	1471	1474	1467	1475	1477	140
15°	1407	1411	1414	1426	1429	397
25°	1279	1290	1303	1324	1328	589
35°	1105	1119	1145	1173	1181	689
45°	891	913	953	989	997	687
55°	664	694	744	783	791	595
65°	437	470	531	575	585	435
75°	222	265	333	378	389	235
85°	45	84	104	102	102	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1478.1	1478.1	1478.1	1478.1	1478.1
2.5°	1479.4	1479.4	1472.8	1479.4	1480.8
5°	1471.4	1474.1	1467.4	1475.4	1476.8
7.5°	1463.4	1463.4	1459.4	1467.4	1468.8
10°	1448.7	1450.0	1448.7	1458.1	1459.4
12.5°	1430.0	1432.7	1434.0	1443.4	1444.7
15°	1407.3	1411.3	1414.0	1426.0	1428.7
17.5°	1381.9	1385.9	1392.6	1405.9	1408.6
20°	1351.1	1356.5	1364.5	1381.9	1385.9
22.5°	1317.7	1323.1	1336.4	1352.5	1359.2
25°	1279.0	1289.7	1303.0	1324.4	1328.4
27.5°	1240.2	1249.6	1267.0	1289.7	1295.0
30°	1194.8	1209.5	1230.9	1253.6	1258.9
32.5°	1150.7	1165.4	1190.8	1214.8	1221.5
35°	1105.2	1118.6	1145.3	1173.4	1181.4
37.5°	1053.1	1070.5	1099.9	1128.0	1136.0
40°	998.3	1019.7	1053.1	1082.5	1091.9
42.5°	946.2	968.9	1002.3	1034.4	1045.1
45°	891.4	912.8	952.9	989.0	997.0
47.5°	835.3	859.3	902.1	938.2	951.6
50°	779.1	804.5	850.0	887.4	895.4
52.5°	723.0	749.7	797.9	838.0	842.0
55°	664.2	693.6	744.4	783.2	791.2
57.5°	610.8	636.1	690.9	731.0	740.4
60°	552.0	580.0	638.8	676.2	688.3
62.5°	495.8	525.2	586.7	624.1	634.8
65°	437.0	470.4	530.6	574.7	585.4
67.5°	386.2	418.3	482.5	525.2	535.9
70°	327.4	363.5	431.7	475.8	486.5
72.5°	276.6	314.1	382.2	425.0	441.0
75°	221.9	264.6	332.8	378.2	388.9
77.5°	168.4	217.8	287.3	322.1	322.1
80°	120.3	172.4	236.6	252.6	255.3
82.5°	78.9	129.6	175.1	173.7	173.7
85°	45.4	84.2	104.2	101.6	101.6
87.5°	17.4	34.7	37.4	37.4	36.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)