

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: P276628

Luminaire Tested: **24CZ2-45HE-S-UNV-L92765-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: P276628  
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: 24CZ2-45HE-S-UNV-L92765-W2A1-U-4500K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 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: 4039.6 lumens  
Efficiency: N/A  
Efficacy: 126.3 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

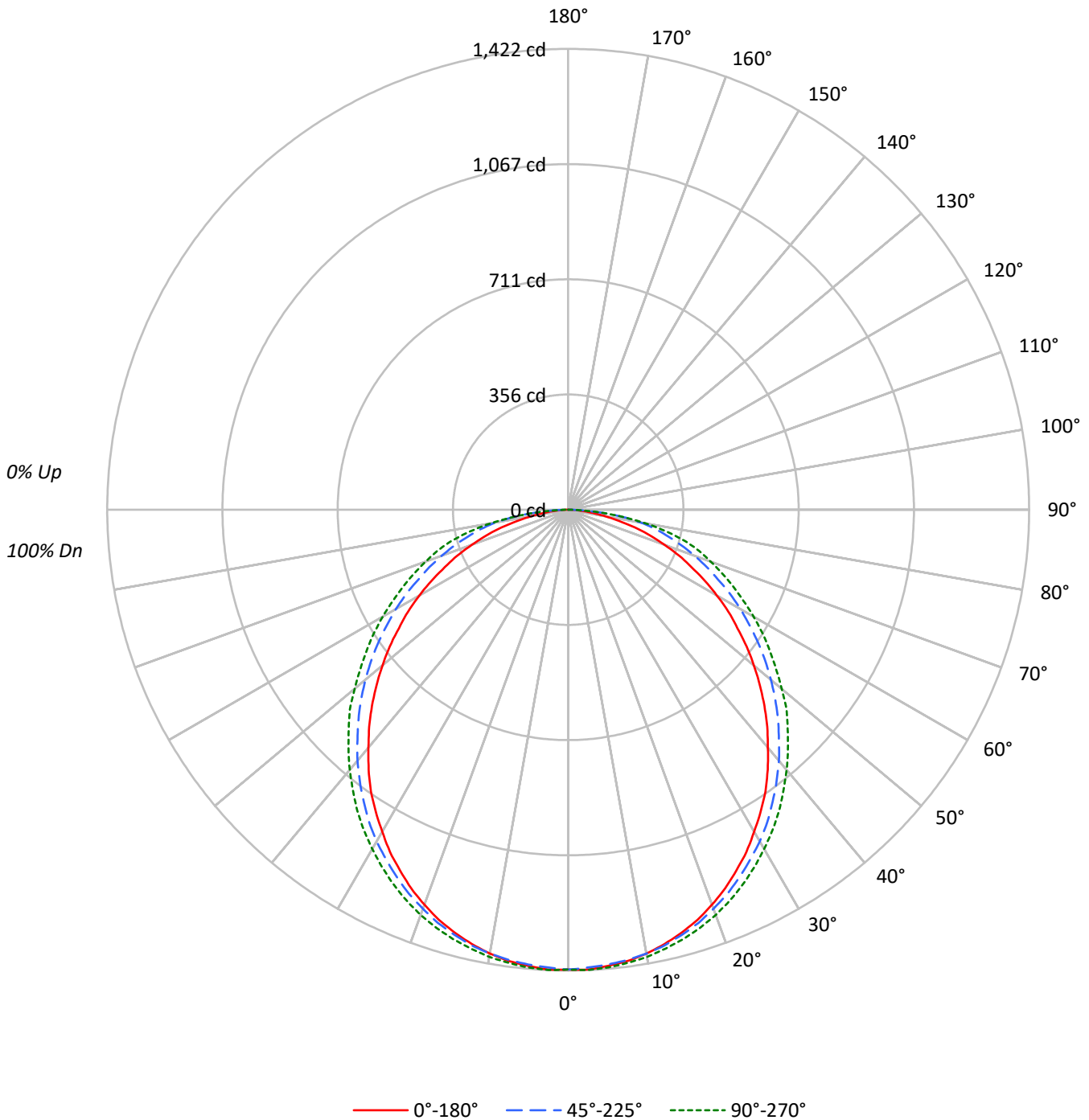
Input Watts (W): 31.992  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1909	1909	1909
5°	1908	1903	1915
10°	1900	1900	1914
15°	1882	1891	1911
20°	1857	1876	1905
25°	1823	1857	1893
30°	1782	1836	1878
35°	1743	1806	1863
40°	1684	1776	1841
45°	1628	1741	1821
50°	1566	1708	1800
55°	1496	1677	1782
60°	1426	1650	1778
65°	1336	1622	1789
70°	1237	1630	1838
75°	1107	1661	1941
80°	895	1760	1899
85°	673	1545	1505



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.4	3.3
10°-20°	383.9	9.5
20°-30°	577.1	14.3
30°-40°	687.4	17.0
40°-50°	703.5	17.4
50°-60°	633.4	15.7
60°-70°	497.4	12.3
70°-80°	322.8	8.0
80°-90°	99.8	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°	1095.3	27.1
0°-40°	1782.7	44.1
0°-60°	3119.6	77.2
0°-90°	4039.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4039.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1419	1419	1419	1419	1419	
5°	1413	1415	1409	1417	1418	134
15°	1351	1355	1358	1369	1372	381
25°	1228	1238	1251	1272	1275	566
35°	1061	1074	1100	1127	1134	662
45°	856	876	915	950	957	660
55°	638	666	715	752	760	572
65°	420	452	509	552	562	418
75°	213	254	320	363	373	225
85°	44	81	100	98	98	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1419.1	1419.1	1419.1	1419.1	1419.1
2.5°	1420.4	1420.4	1414.0	1420.4	1421.7
5°	1412.7	1415.3	1408.9	1416.6	1417.9
7.5°	1405.0	1405.0	1401.2	1408.9	1410.2
10°	1390.9	1392.2	1390.9	1399.9	1401.2
12.5°	1372.9	1375.5	1376.8	1385.8	1387.1
15°	1351.1	1355.0	1357.5	1369.1	1371.7
17.5°	1326.8	1330.6	1337.0	1349.8	1352.4
20°	1297.2	1302.4	1310.1	1326.8	1330.6
22.5°	1265.2	1270.3	1283.1	1298.5	1304.9
25°	1227.9	1238.2	1251.0	1271.6	1275.4
27.5°	1190.7	1199.7	1216.4	1238.2	1243.3
30°	1147.1	1161.2	1181.8	1203.6	1208.7
32.5°	1104.8	1118.9	1143.3	1166.4	1172.8
35°	1061.1	1074.0	1099.6	1126.6	1134.3
37.5°	1011.1	1027.8	1056.0	1083.0	1090.7
40°	958.5	979.0	1011.1	1039.3	1048.3
42.5°	908.5	930.3	962.3	993.1	1003.4
45°	855.8	876.4	914.9	949.5	957.2
47.5°	802.0	825.0	866.1	900.8	913.6
50°	748.1	772.4	816.1	852.0	859.7
52.5°	694.2	719.8	766.0	804.5	808.4
55°	637.7	665.9	714.7	751.9	759.6
57.5°	586.4	610.8	663.4	701.9	710.9
60°	529.9	556.9	613.3	649.3	660.8
62.5°	476.0	504.3	563.3	599.2	609.5
65°	419.6	451.7	509.4	551.7	562.0
67.5°	370.8	401.6	463.2	504.3	514.5
70°	314.4	349.0	414.4	456.8	467.1
72.5°	265.6	301.5	367.0	408.0	423.4
75°	213.0	254.1	319.5	363.1	373.4
77.5°	161.7	209.1	275.9	309.2	309.2
80°	115.5	165.5	227.1	242.5	245.1
82.5°	75.7	124.5	168.1	166.8	166.8
85°	43.6	80.8	100.1	97.5	97.5
87.5°	16.7	33.4	35.9	35.9	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)