

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: P276631

Luminaire Tested: **24CZ2-45HE-S-UNV-L92765-W2A1-U-5700K**

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: P276631  
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-5700K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 5700K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4202.6 lumens  
Efficiency: N/A  
Efficacy: 129.9 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

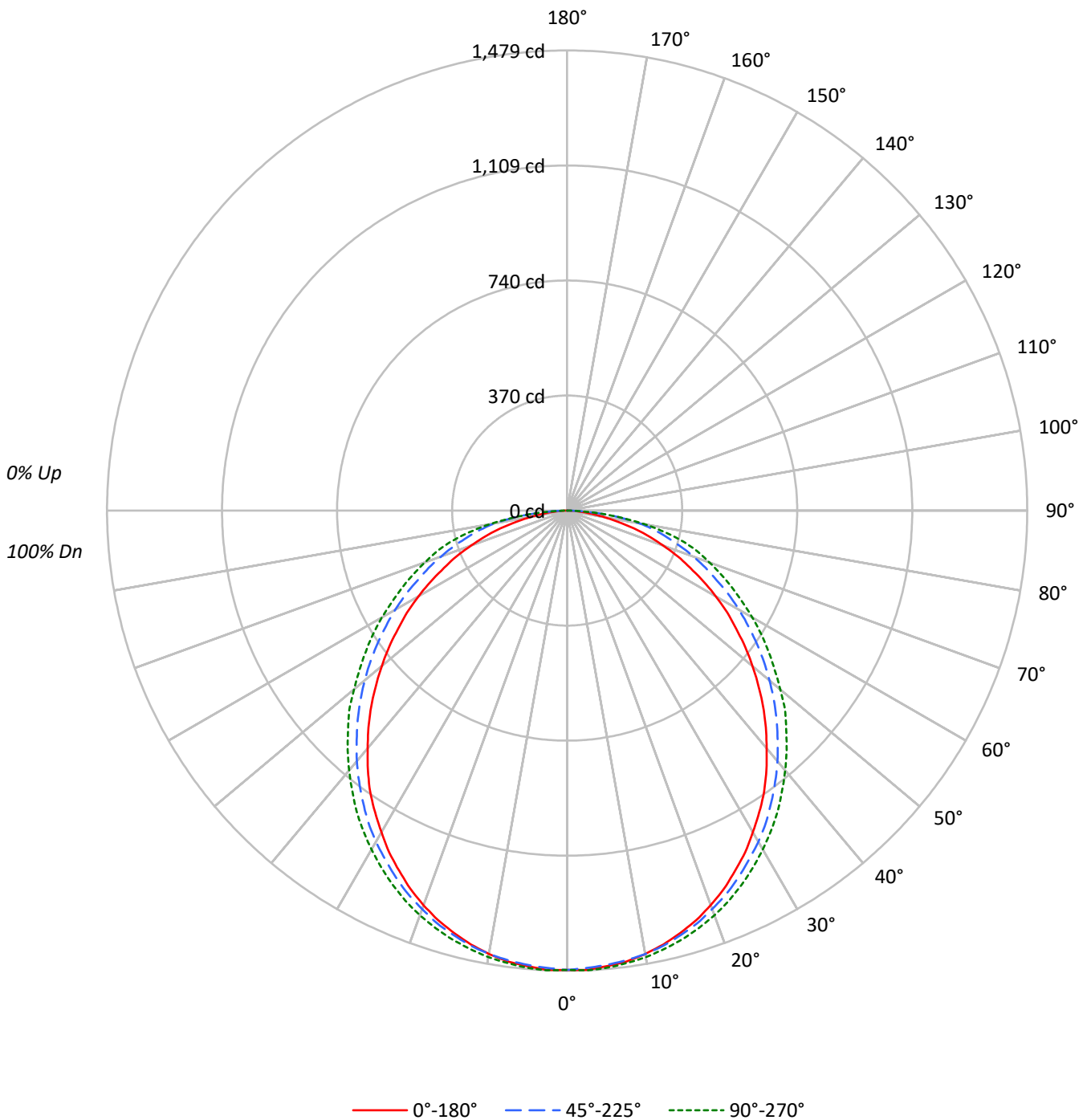
Input Watts (W): 32.364  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1986	1986	1986
5°	1985	1980	1992
10°	1977	1977	1992
15°	1958	1967	1988
20°	1932	1951	1982
25°	1897	1932	1970
30°	1854	1910	1954
35°	1813	1879	1938
40°	1751	1848	1916
45°	1694	1811	1895
50°	1629	1777	1872
55°	1556	1744	1854
60°	1484	1717	1850
65°	1390	1687	1862
70°	1287	1696	1912
75°	1152	1728	2020
80°	931	1831	1976
85°	701	1607	1567



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.8	3.3
10°-20°	399.4	9.5
20°-30°	600.4	14.3
30°-40°	715.1	17.0
40°-50°	731.9	17.4
50°-60°	658.9	15.7
60°-70°	517.5	12.3
70°-80°	335.8	8.0
80°-90°	103.9	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°	1139.5	27.1
0°-40°	1854.6	44.1
0°-60°	3245.4	77.2
0°-90°	4202.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4202.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1476	1476	1476	1476	1476	
5°	1470	1472	1466	1474	1475	140
15°	1406	1410	1412	1424	1427	396
25°	1278	1288	1302	1323	1327	589
35°	1104	1117	1144	1172	1180	689
45°	890	912	952	988	996	686
55°	663	693	744	782	790	595
65°	436	470	530	574	585	435
75°	222	264	332	378	388	234
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°	1476.4	1476.4	1476.4	1476.4	1476.4
2.5°	1477.7	1477.7	1471.1	1477.7	1479.1
5°	1469.7	1472.4	1465.7	1473.7	1475.1
7.5°	1461.7	1461.7	1457.7	1465.7	1467.1
10°	1447.0	1448.4	1447.0	1456.4	1457.7
12.5°	1428.3	1431.0	1432.4	1441.7	1443.0
15°	1405.7	1409.7	1412.3	1424.3	1427.0
17.5°	1380.3	1384.3	1391.0	1404.3	1407.0
20°	1349.6	1354.9	1362.9	1380.3	1384.3
22.5°	1316.2	1321.6	1334.9	1350.9	1357.6
25°	1277.5	1288.2	1301.5	1322.9	1326.9
27.5°	1238.8	1248.1	1265.5	1288.2	1293.5
30°	1193.4	1208.1	1229.4	1252.1	1257.5
32.5°	1149.4	1164.0	1189.4	1213.4	1220.1
35°	1104.0	1117.3	1144.0	1172.0	1180.1
37.5°	1051.9	1069.3	1098.6	1126.7	1134.7
40°	997.2	1018.5	1051.9	1081.3	1090.6
42.5°	945.1	967.8	1001.2	1033.2	1043.9
45°	890.4	911.7	951.8	987.8	995.8
47.5°	834.3	858.3	901.1	937.1	950.5
50°	778.2	803.6	849.0	886.4	894.4
52.5°	722.2	748.9	796.9	837.0	841.0
55°	663.4	692.8	743.5	782.3	790.3
57.5°	610.1	635.4	690.1	730.2	739.5
60°	551.3	579.3	638.1	675.5	687.5
62.5°	495.2	524.6	586.0	623.4	634.1
65°	436.5	469.9	530.0	574.0	584.7
67.5°	385.8	417.8	481.9	524.6	535.3
70°	327.1	363.1	431.2	475.2	485.9
72.5°	276.3	313.7	381.8	424.5	440.5
75°	221.6	264.3	332.4	377.8	388.5
77.5°	168.2	217.6	287.0	321.7	321.7
80°	120.1	172.2	236.3	252.3	255.0
82.5°	78.8	129.5	174.9	173.5	173.5
85°	45.4	84.1	104.1	101.5	101.5
87.5°	17.4	34.7	37.4	37.4	36.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)