

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: P276490

Luminaire Tested: **24CZ2-45HE-S-UNV-L82765-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276490  
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-L82765-W2A1-U-3000K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 80 CRI LEDS TUNED TO 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4208.6 lumens  
Efficiency: N/A  
Efficacy: 134.7 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

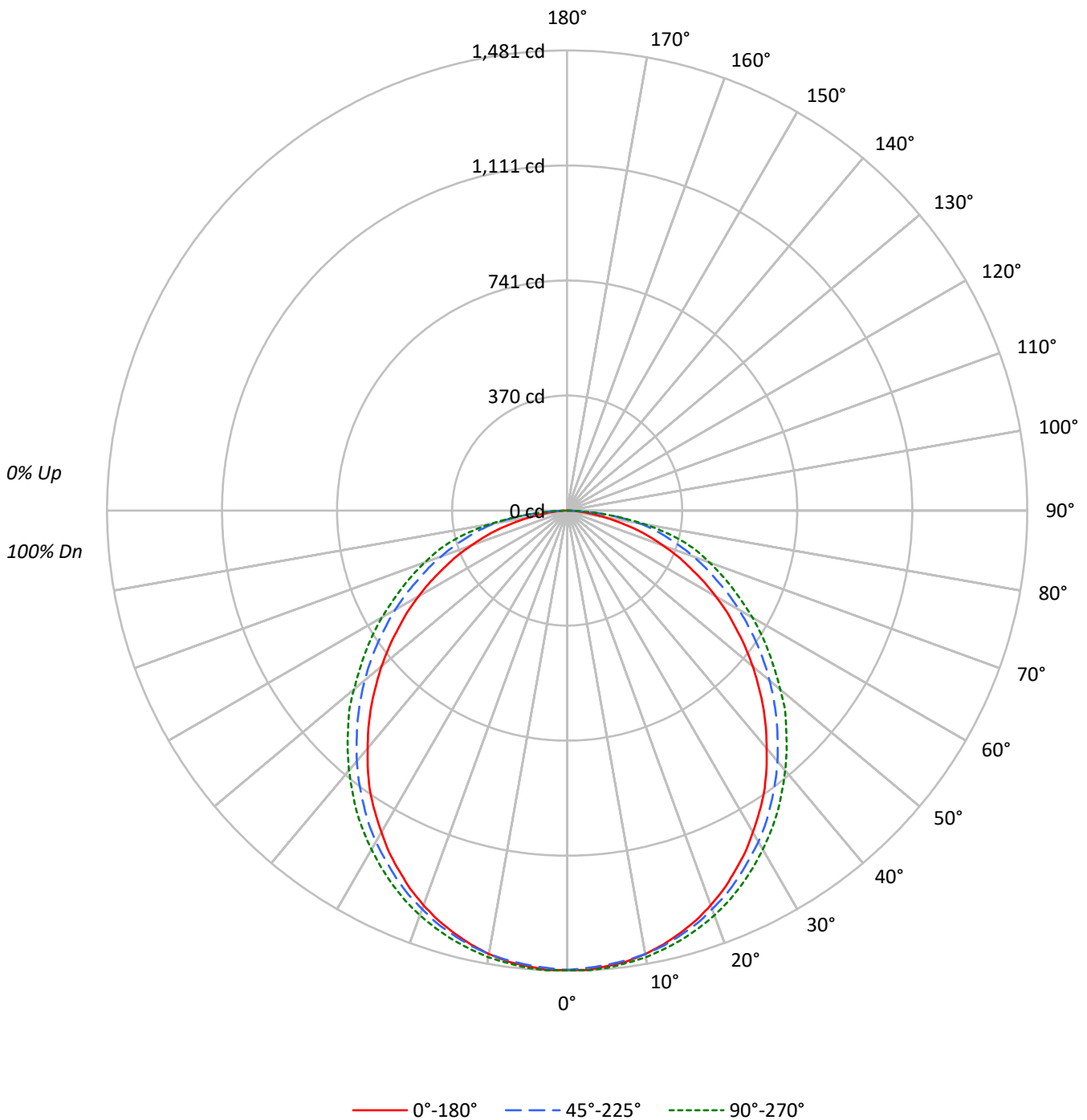
Input Watts (W): 31.248  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1988	1982	1995
10°	1980	1980	1994
15°	1961	1970	1991
20°	1935	1954	1985
25°	1899	1935	1973
30°	1857	1913	1956
35°	1816	1882	1941
40°	1754	1850	1918
45°	1697	1814	1898
50°	1631	1780	1875
55°	1559	1747	1856
60°	1486	1720	1853
65°	1392	1690	1864
70°	1288	1699	1914
75°	1154	1731	2022
80°	932	1833	1978
85°	702	1610	1568



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.0	3.3
10°-20°	399.9	9.5
20°-30°	601.2	14.3
30°-40°	716.1	17.0
40°-50°	732.9	17.4
50°-60°	659.9	15.7
60°-70°	518.2	12.3
70°-80°	336.3	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°	1141.1	27.1
0°-40°	1857.3	44.1
0°-60°	3250.0	77.2
0°-90°	4208.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4208.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1478	1478	1478	1478	1478	
5°	1472	1474	1468	1476	1477	140
15°	1408	1412	1414	1426	1429	397
25°	1279	1290	1303	1325	1329	589
35°	1106	1119	1146	1174	1182	690
45°	892	913	953	989	997	687
55°	664	694	745	783	791	596
65°	437	471	531	575	586	435
75°	222	265	333	378	389	235
85°	46	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°	1478.5	1478.5	1478.5	1478.5	1478.5
2.5°	1479.8	1479.8	1473.2	1479.8	1481.2
5°	1471.8	1474.5	1467.8	1475.8	1477.2
7.5°	1463.8	1463.8	1459.8	1467.8	1469.1
10°	1449.1	1450.4	1449.1	1458.4	1459.8
12.5°	1430.4	1433.0	1434.4	1443.7	1445.1
15°	1407.6	1411.7	1414.3	1426.4	1429.0
17.5°	1382.2	1386.3	1392.9	1406.3	1409.0
20°	1351.5	1356.9	1364.9	1382.2	1386.3
22.5°	1318.1	1323.4	1336.8	1352.8	1359.5
25°	1279.3	1290.0	1303.4	1324.8	1328.8
27.5°	1240.5	1249.9	1267.3	1290.0	1295.4
30°	1195.1	1209.8	1231.2	1253.9	1259.3
32.5°	1151.0	1165.7	1191.1	1215.1	1221.8
35°	1105.5	1118.9	1145.6	1173.7	1181.7
37.5°	1053.4	1070.8	1100.2	1128.3	1136.3
40°	998.6	1020.0	1053.4	1082.8	1092.2
42.5°	946.5	969.2	1002.6	1034.7	1045.4
45°	891.6	913.0	953.1	989.2	997.3
47.5°	835.5	859.6	902.3	938.4	951.8
50°	779.4	804.8	850.2	887.6	895.7
52.5°	723.2	749.9	798.1	838.2	842.2
55°	664.4	693.8	744.6	783.4	791.4
57.5°	610.9	636.3	691.1	731.2	740.6
60°	552.1	580.2	639.0	676.4	688.5
62.5°	496.0	525.4	586.9	624.3	635.0
65°	437.1	470.6	530.7	574.8	585.5
67.5°	386.3	418.4	482.6	525.4	536.1
70°	327.5	363.6	431.8	475.9	486.6
72.5°	276.7	314.1	382.3	425.1	441.1
75°	221.9	264.7	332.9	378.3	389.0
77.5°	168.4	217.9	287.4	322.2	322.2
80°	120.3	172.4	236.6	252.7	255.3
82.5°	78.9	129.7	175.1	173.8	173.8
85°	45.5	84.2	104.3	101.6	101.6
87.5°	17.4	34.8	37.4	37.4	36.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)