

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: P276327

Luminaire Tested: **24CZ2-45HE-S-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276327  
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-L83050-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: 4213.0 lumens  
Efficiency: N/A  
Efficacy: 134.3 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

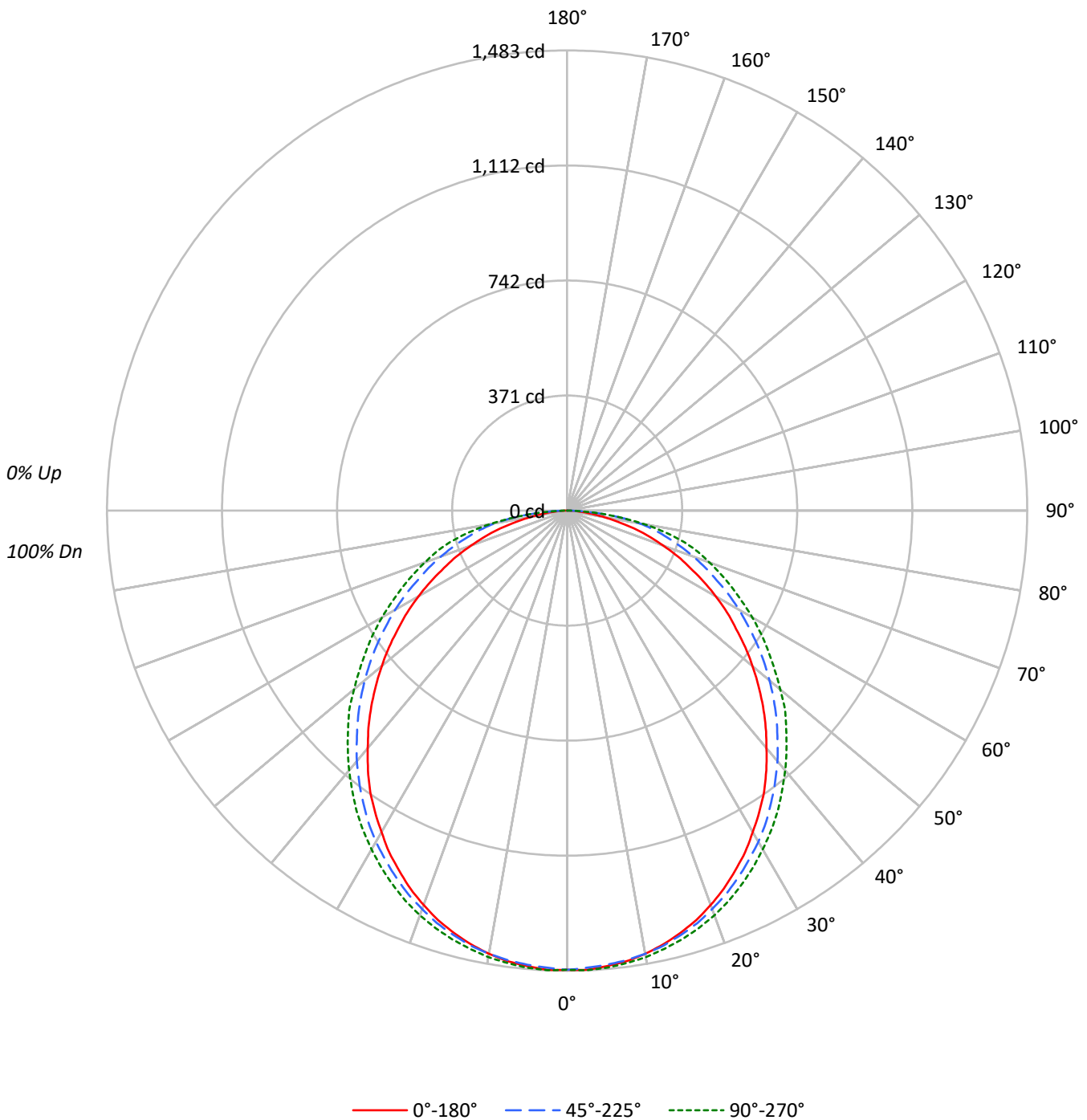
Input Watts (W): 31.371132  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1991	1991	1991
5°	1990	1984	1997
10°	1982	1982	1996
15°	1963	1972	1993
20°	1937	1956	1987
25°	1901	1937	1975
30°	1859	1915	1959
35°	1818	1884	1943
40°	1756	1852	1920
45°	1698	1815	1900
50°	1633	1782	1877
55°	1560	1749	1858
60°	1487	1721	1855
65°	1393	1691	1866
70°	1290	1700	1916
75°	1155	1732	2024
80°	933	1836	1980
85°	702	1612	1570



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.1	3.3
10°-20°	400.4	9.5
20°-30°	601.8	14.3
30°-40°	716.9	17.0
40°-50°	733.7	17.4
50°-60°	660.6	15.7
60°-70°	518.7	12.3
70°-80°	336.7	8.0
80°-90°	104.1	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°	1142.3	27.1
0°-40°	1859.2	44.1
0°-60°	3253.5	77.2
0°-90°	4213.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4213.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1480	1480	1480	1480	1480	
5°	1473	1476	1469	1477	1479	140
15°	1409	1413	1416	1428	1430	397
25°	1281	1291	1305	1326	1330	590
35°	1107	1120	1147	1175	1183	690
45°	893	914	954	990	998	688
55°	665	694	745	784	792	596
65°	438	471	531	575	586	436
75°	222	265	333	379	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°	1480.1	1480.1	1480.1	1480.1	1480.1
2.5°	1481.4	1481.4	1474.7	1481.4	1482.7
5°	1473.4	1476.0	1469.3	1477.4	1478.7
7.5°	1465.3	1465.3	1461.3	1469.3	1470.7
10°	1450.6	1452.0	1450.6	1460.0	1461.3
12.5°	1431.9	1434.6	1435.9	1445.3	1446.6
15°	1409.1	1413.1	1415.8	1427.9	1430.5
17.5°	1383.7	1387.7	1394.4	1407.8	1410.5
20°	1352.9	1358.3	1366.3	1383.7	1387.7
22.5°	1319.5	1324.8	1338.2	1354.3	1361.0
25°	1280.7	1291.4	1304.7	1326.2	1330.2
27.5°	1241.9	1251.2	1268.6	1291.4	1296.7
30°	1196.4	1211.1	1232.5	1255.2	1260.6
32.5°	1152.2	1166.9	1192.3	1216.4	1223.1
35°	1106.7	1120.1	1146.8	1174.9	1183.0
37.5°	1054.5	1071.9	1101.3	1129.4	1137.5
40°	999.6	1021.1	1054.5	1083.9	1093.3
42.5°	947.4	970.2	1003.7	1035.8	1046.5
45°	892.6	914.0	954.1	990.3	998.3
47.5°	836.4	860.5	903.3	939.4	952.8
50°	780.2	805.6	851.1	888.6	896.6
52.5°	724.0	750.7	798.9	839.1	843.1
55°	665.1	694.5	745.4	784.2	792.2
57.5°	611.6	637.0	691.9	732.0	741.4
60°	552.7	580.8	639.7	677.1	689.2
62.5°	496.5	525.9	587.5	624.9	635.6
65°	437.6	471.0	531.3	575.4	586.1
67.5°	386.7	418.9	483.1	525.9	536.6
70°	327.9	364.0	432.2	476.4	487.1
72.5°	277.0	314.5	382.7	425.5	441.6
75°	222.1	265.0	333.2	378.7	389.4
77.5°	168.6	218.1	287.7	322.5	322.5
80°	120.4	172.6	236.9	252.9	255.6
82.5°	79.0	129.8	175.3	174.0	174.0
85°	45.5	84.3	104.4	101.7	101.7
87.5°	17.4	34.8	37.5	37.5	36.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)