

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: P473785

Luminaire Tested: **24CZ2-45VHE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473785
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45VHE-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

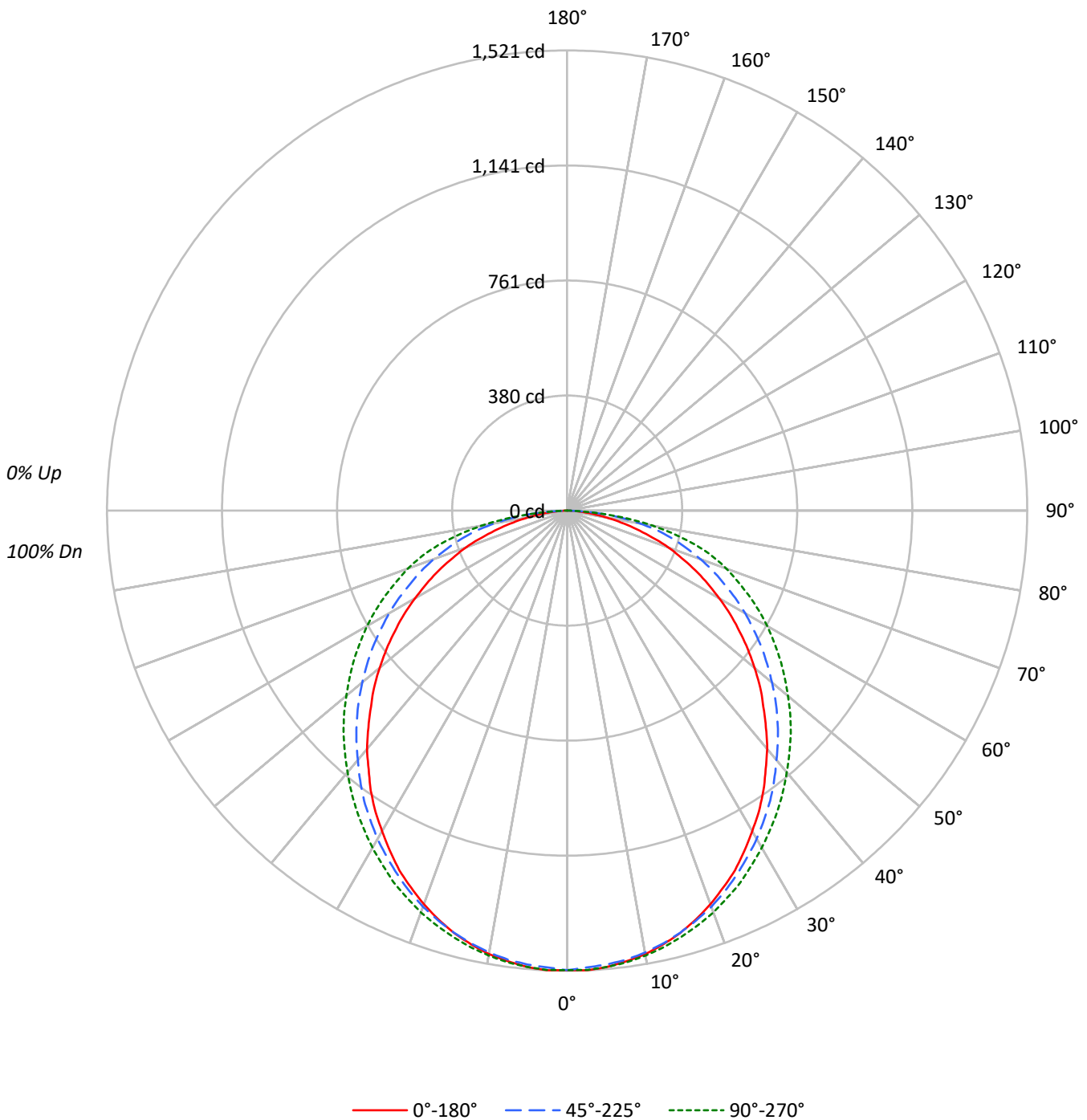
Lumens per Lamp: N/A
Luminaire Lumens: 4395.5 lumens
Efficiency: N/A
Efficacy: 143.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 30.7
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	105	101	97	93	97	93	90		93	90	87		89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74		81	76	72		78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61		71	65	60		68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52		63	57	51		61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45		56	50	44		55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39		51	44	39		49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35		47	40	35		45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31		43	36	31		41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25		36	30	25		36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2044	2044	2044
5°	2045	2034	2045
10°	2034	2027	2040
15°	2013	2012	2032
20°	1983	1995	2023
25°	1948	1970	2014
30°	1901	1947	1999
35°	1858	1922	1991
40°	1807	1891	1983
45°	1746	1871	1989
50°	1693	1851	1995
55°	1631	1837	2017
60°	1563	1829	2054
65°	1490	1822	2107
70°	1402	1841	2204
75°	1233	1879	2293
80°	1029	1893	2212
85°	735	1623	1644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.6	3.3
10°-20°	409.0	9.3
20°-30°	613.6	14.0
30°-40°	732.5	16.7
40°-50°	758.8	17.3
50°-60°	698.5	15.9
60°-70°	563.5	12.8
70°-80°	368.2	8.4
80°-90°	107.9	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°	1166.1	26.5
0°-40°	1898.7	43.2
0°-60°	3355.9	76.3
0°-90°	4395.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4395.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1519	1519	1519	1519	1519	
5°	1514	1512	1506	1515	1514	144
15°	1445	1445	1444	1459	1459	407
25°	1312	1315	1327	1351	1356	603
35°	1131	1141	1170	1202	1212	707
45°	918	940	984	1028	1045	709
55°	695	725	783	841	860	622
65°	468	500	572	638	662	463
75°	237	282	361	424	441	253
85°	48	82	105	112	106	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1518.9	1518.9	1518.9	1518.9	1518.9
2.5°	1521.1	1518.9	1511.1	1520.3	1519.6
5°	1514.0	1512.5	1506.1	1514.7	1514.0
7.5°	1502.6	1501.9	1496.9	1506.1	1506.1
10°	1488.4	1487.0	1483.4	1494.1	1493.4
12.5°	1468.5	1467.8	1465.7	1478.4	1477.7
15°	1445.1	1445.1	1444.4	1458.6	1458.6
17.5°	1416.7	1417.4	1420.2	1436.6	1437.3
20°	1384.7	1387.6	1393.2	1411.7	1413.1
22.5°	1348.5	1354.2	1362.0	1382.6	1384.7
25°	1312.3	1315.1	1327.2	1351.3	1356.3
27.5°	1268.3	1275.4	1291.0	1315.8	1320.8
30°	1223.5	1233.5	1253.3	1278.9	1286.7
32.5°	1179.5	1188.0	1211.4	1240.6	1249.8
35°	1131.2	1141.1	1170.3	1202.2	1212.2
37.5°	1077.9	1093.6	1124.1	1161.0	1171.7
40°	1028.9	1043.2	1076.5	1117.7	1129.1
42.5°	972.8	990.6	1031.1	1073.0	1087.2
45°	917.5	940.2	983.5	1027.5	1045.3
47.5°	865.6	884.1	935.2	984.9	1000.5
50°	808.8	830.1	884.1	936.6	953.0
52.5°	752.7	778.3	833.0	888.3	906.1
55°	695.2	725.0	783.3	840.8	859.9
57.5°	639.8	669.6	730.0	791.1	810.9
60°	580.9	612.8	679.6	738.5	763.4
62.5°	524.1	556.0	626.3	690.2	713.7
65°	468.0	499.9	572.3	637.7	661.8
67.5°	409.7	444.5	521.9	585.1	608.6
70°	356.5	389.8	468.0	535.4	560.3
72.5°	295.4	335.2	414.7	481.5	504.9
75°	237.2	281.9	361.4	423.9	441.0
77.5°	183.2	227.9	307.5	354.3	365.0
80°	132.8	178.2	244.3	276.9	285.5
82.5°	85.9	132.8	176.8	198.8	201.7
85°	47.6	82.4	105.1	111.5	106.5
87.5°	17.0	31.2	30.5	24.9	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)