

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: P473933

Luminaire Tested: **24CZ2-35VHE-UNV-L850-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473933
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35VHE-UNV-L850-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

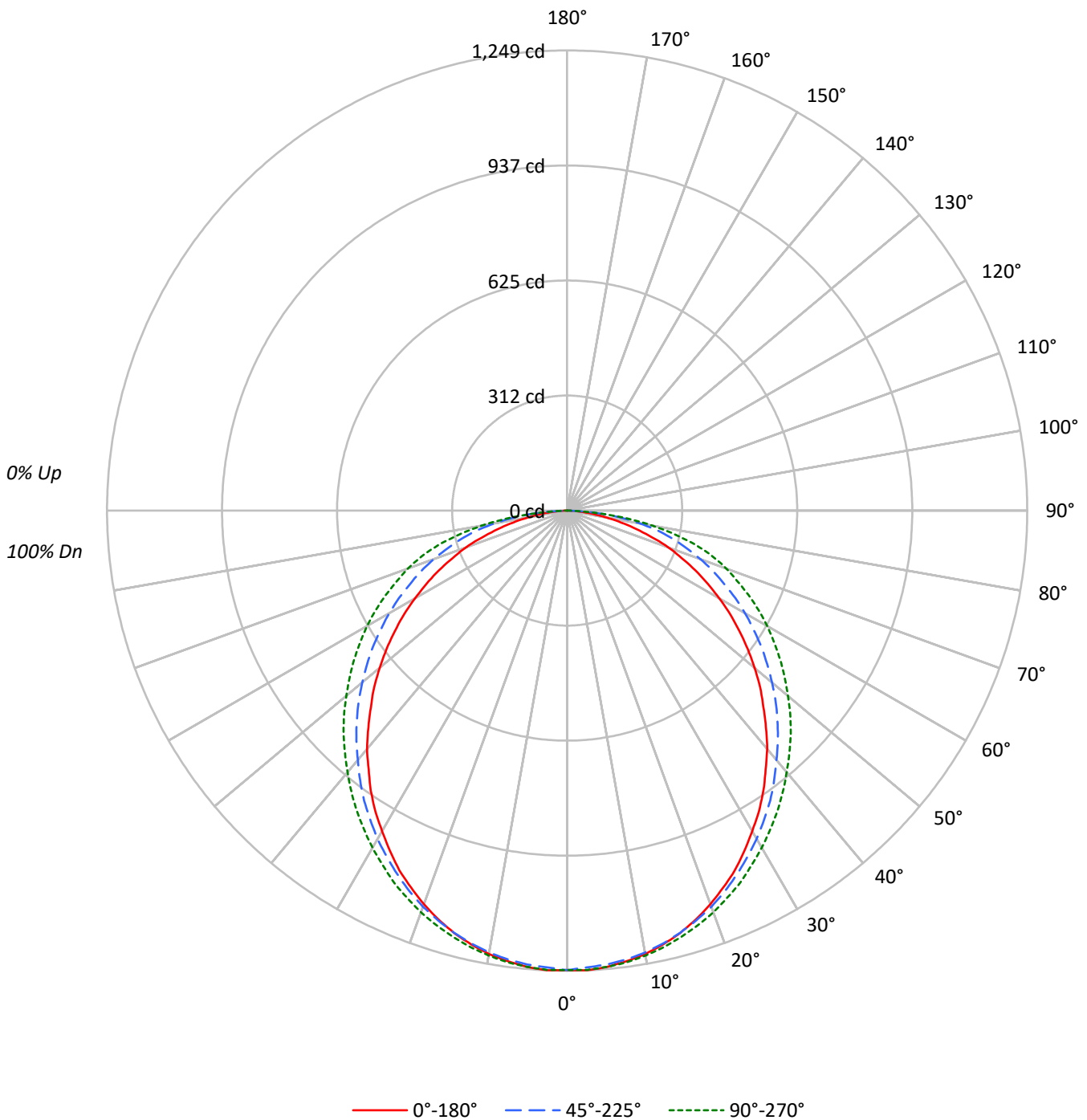
Lumens per Lamp: N/A
Luminaire Lumens: 3609.3 lumens
Efficiency: N/A
Efficacy: 151.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.9
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°	1678	1678	1678
5°	1679	1670	1679
10°	1670	1664	1675
15°	1653	1652	1668
20°	1628	1638	1661
25°	1600	1618	1653
30°	1561	1599	1642
35°	1526	1578	1635
40°	1484	1553	1628
45°	1433	1537	1633
50°	1390	1519	1638
55°	1339	1509	1656
60°	1284	1502	1687
65°	1223	1496	1730
70°	1151	1512	1810
75°	1013	1543	1882
80°	845	1554	1816
85°	604	1332	1351



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.9	3.3
10°-20°	335.8	9.3
20°-30°	503.8	14.0
30°-40°	601.5	16.7
40°-50°	623.0	17.3
50°-60°	573.6	15.9
60°-70°	462.7	12.8
70°-80°	302.3	8.4
80°-90°	88.6	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°	957.5	26.5
0°-40°	1559.0	43.2
0°-60°	2755.6	76.3
0°-90°	3609.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3609.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1247	1247	1247	1247	1247	
5°	1243	1242	1237	1244	1243	118
15°	1187	1187	1186	1198	1198	334
25°	1078	1080	1090	1110	1114	495
35°	929	937	961	987	995	580
45°	753	772	808	844	858	582
55°	571	595	643	690	706	511
65°	384	410	470	524	543	380
75°	195	232	297	348	362	208
85°	39	68	86	92	88	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1247.2	1247.2	1247.2	1247.2	1247.2
2.5°	1249.0	1247.2	1240.8	1248.4	1247.8
5°	1243.1	1242.0	1236.7	1243.7	1243.1
7.5°	1233.8	1233.2	1229.1	1236.7	1236.7
10°	1222.1	1221.0	1218.1	1226.8	1226.2
12.5°	1205.8	1205.2	1203.5	1214.0	1213.4
15°	1186.6	1186.6	1186.0	1197.7	1197.7
17.5°	1163.3	1163.8	1166.2	1179.6	1180.2
20°	1137.0	1139.3	1144.0	1159.2	1160.3
22.5°	1107.3	1111.9	1118.4	1135.3	1137.0
25°	1077.5	1079.9	1089.8	1109.6	1113.7
27.5°	1041.4	1047.2	1060.0	1080.5	1084.5
30°	1004.7	1012.8	1029.1	1050.1	1056.6
32.5°	968.5	975.5	994.7	1018.7	1026.2
35°	928.9	937.0	960.9	987.2	995.3
37.5°	885.1	898.0	923.0	953.3	962.1
40°	844.9	856.6	884.0	917.8	927.1
42.5°	798.8	813.4	846.6	881.0	892.7
45°	753.3	772.0	807.6	843.7	858.3
47.5°	710.8	725.9	767.9	808.7	821.6
50°	664.1	681.6	725.9	769.1	782.5
52.5°	618.1	639.1	684.0	729.4	744.0
55°	570.8	595.3	643.1	690.4	706.1
57.5°	525.4	549.8	599.4	649.6	665.9
60°	477.0	503.2	558.0	606.4	626.8
62.5°	430.3	456.6	514.3	566.8	586.0
65°	384.3	410.5	470.0	523.6	543.4
67.5°	336.4	365.0	428.6	480.5	499.7
70°	292.7	320.1	384.3	439.6	460.1
72.5°	242.6	275.2	340.5	395.3	414.6
75°	194.8	231.5	296.8	348.1	362.1
77.5°	150.4	187.2	252.5	291.0	299.7
80°	109.0	146.4	200.6	227.4	234.4
82.5°	70.6	109.0	145.2	163.3	165.6
85°	39.1	67.6	86.3	91.5	87.5
87.5°	14.0	25.7	25.1	20.4	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)