

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: P473783

Luminaire Tested: **24CZ2-35VHE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473783
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35VHE-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

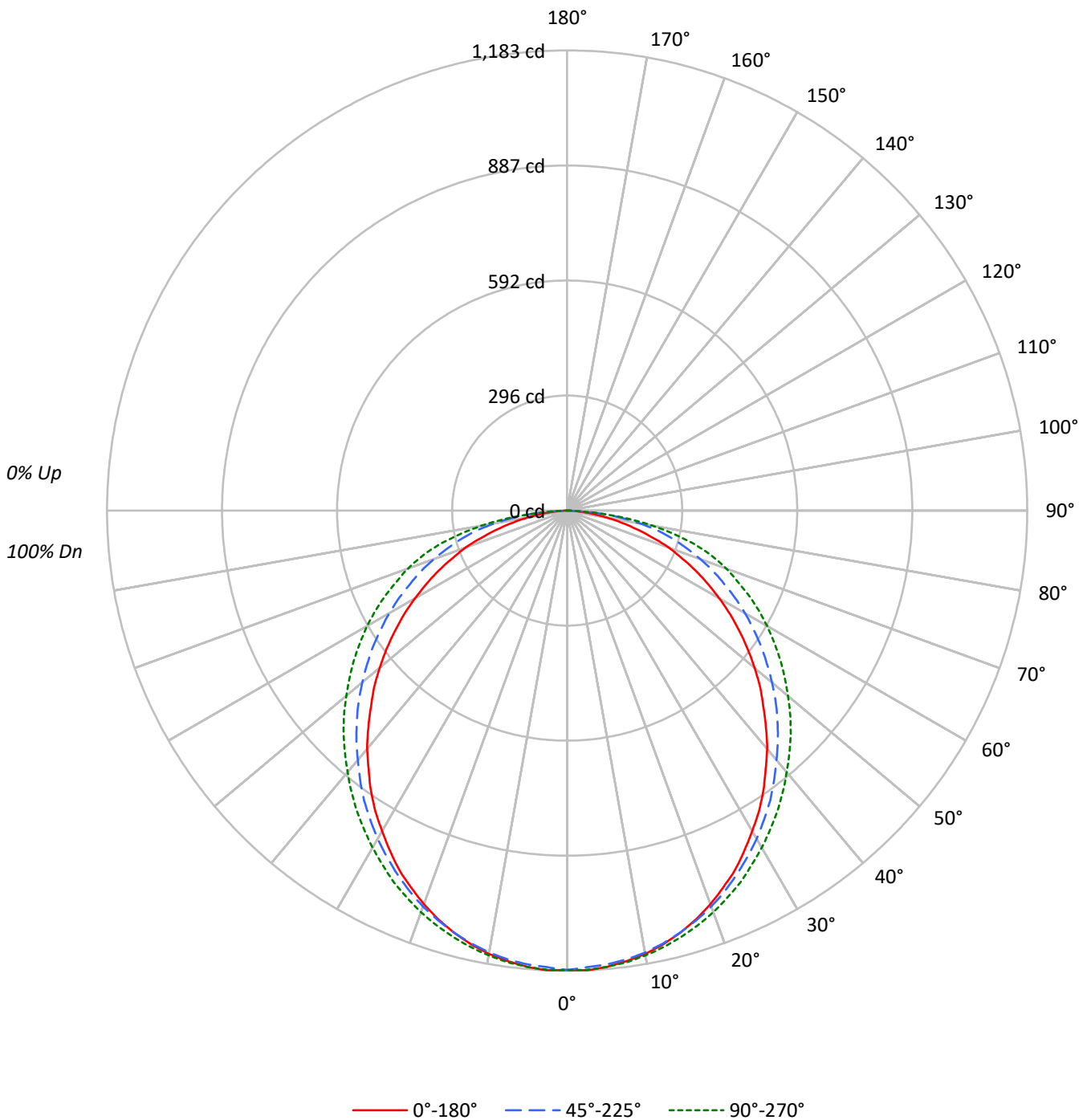
Lumens per Lamp: N/A
Luminaire Lumens: 3418.0 lumens
Efficiency: N/A
Efficacy: 143.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1589	1589	1589
5°	1590	1582	1590
10°	1581	1576	1586
15°	1565	1564	1580
20°	1542	1551	1573
25°	1515	1532	1566
30°	1478	1514	1555
35°	1445	1495	1548
40°	1405	1470	1542
45°	1357	1455	1547
50°	1316	1439	1551
55°	1268	1429	1569
60°	1216	1422	1597
65°	1159	1417	1638
70°	1090	1432	1714
75°	959	1461	1783
80°	800	1472	1720
85°	571	1261	1278



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.7	3.3
10°-20°	318.0	9.3
20°-30°	477.1	14.0
30°-40°	569.6	16.7
40°-50°	590.0	17.3
50°-60°	543.2	15.9
60°-70°	438.2	12.8
70°-80°	286.3	8.4
80°-90°	83.9	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°	906.8	26.5
0°-40°	1476.4	43.2
0°-60°	2609.6	76.3
0°-90°	3418.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3418.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1181	1181	1181	1181	1181	
5°	1177	1176	1171	1178	1177	112
15°	1124	1124	1123	1134	1134	317
25°	1020	1023	1032	1051	1055	469
35°	880	887	910	935	943	549
45°	713	731	765	799	813	551
55°	541	564	609	654	669	484
65°	364	389	445	496	515	360
75°	184	219	281	330	343	197
85°	37	64	82	87	83	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1181.1	1181.1	1181.1	1181.1	1181.1
2.5°	1182.8	1181.1	1175.1	1182.2	1181.7
5°	1177.3	1176.2	1171.2	1177.8	1177.3
7.5°	1168.4	1167.9	1164.0	1171.2	1171.2
10°	1157.4	1156.3	1153.5	1161.8	1161.2
12.5°	1141.9	1141.4	1139.7	1149.7	1149.1
15°	1123.7	1123.7	1123.1	1134.2	1134.2
17.5°	1101.6	1102.2	1104.4	1117.1	1117.6
20°	1076.8	1079.0	1083.4	1097.7	1098.8
22.5°	1048.6	1053.0	1059.1	1075.1	1076.8
25°	1020.4	1022.6	1032.0	1050.8	1054.7
27.5°	986.2	991.7	1003.9	1023.2	1027.1
30°	951.4	959.1	974.6	994.5	1000.6
32.5°	917.2	923.8	942.0	964.7	971.8
35°	879.6	887.4	910.0	934.9	942.6
37.5°	838.2	850.4	874.1	902.8	911.1
40°	800.1	811.2	837.1	869.1	878.0
42.5°	756.5	770.3	801.8	834.4	845.4
45°	713.4	731.1	764.8	799.0	812.8
47.5°	673.1	687.5	727.2	765.9	778.0
50°	628.9	645.5	687.5	728.3	741.0
52.5°	585.3	605.2	647.7	690.8	704.6
55°	540.6	563.8	609.1	653.8	668.7
57.5°	497.5	520.7	567.6	615.1	630.6
60°	451.7	476.5	528.4	574.3	593.6
62.5°	407.5	432.4	487.0	536.7	554.9
65°	363.9	388.7	445.1	495.9	514.6
67.5°	318.6	345.7	405.9	455.0	473.2
70°	277.2	303.1	363.9	416.3	435.7
72.5°	229.7	260.6	322.5	374.4	392.6
75°	184.4	219.2	281.1	329.7	342.9
77.5°	142.5	177.3	239.1	275.5	283.8
80°	103.3	138.6	190.0	215.4	222.0
82.5°	66.8	103.3	137.5	154.6	156.8
85°	37.0	64.1	81.7	86.7	82.8
87.5°	13.3	24.3	23.7	19.3	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)