

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: P474001

Luminaire Tested: **24CZ2-135VHE-S-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474001
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-135VHE-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13366.9 lumens
Efficiency: N/A
Efficacy: 138.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

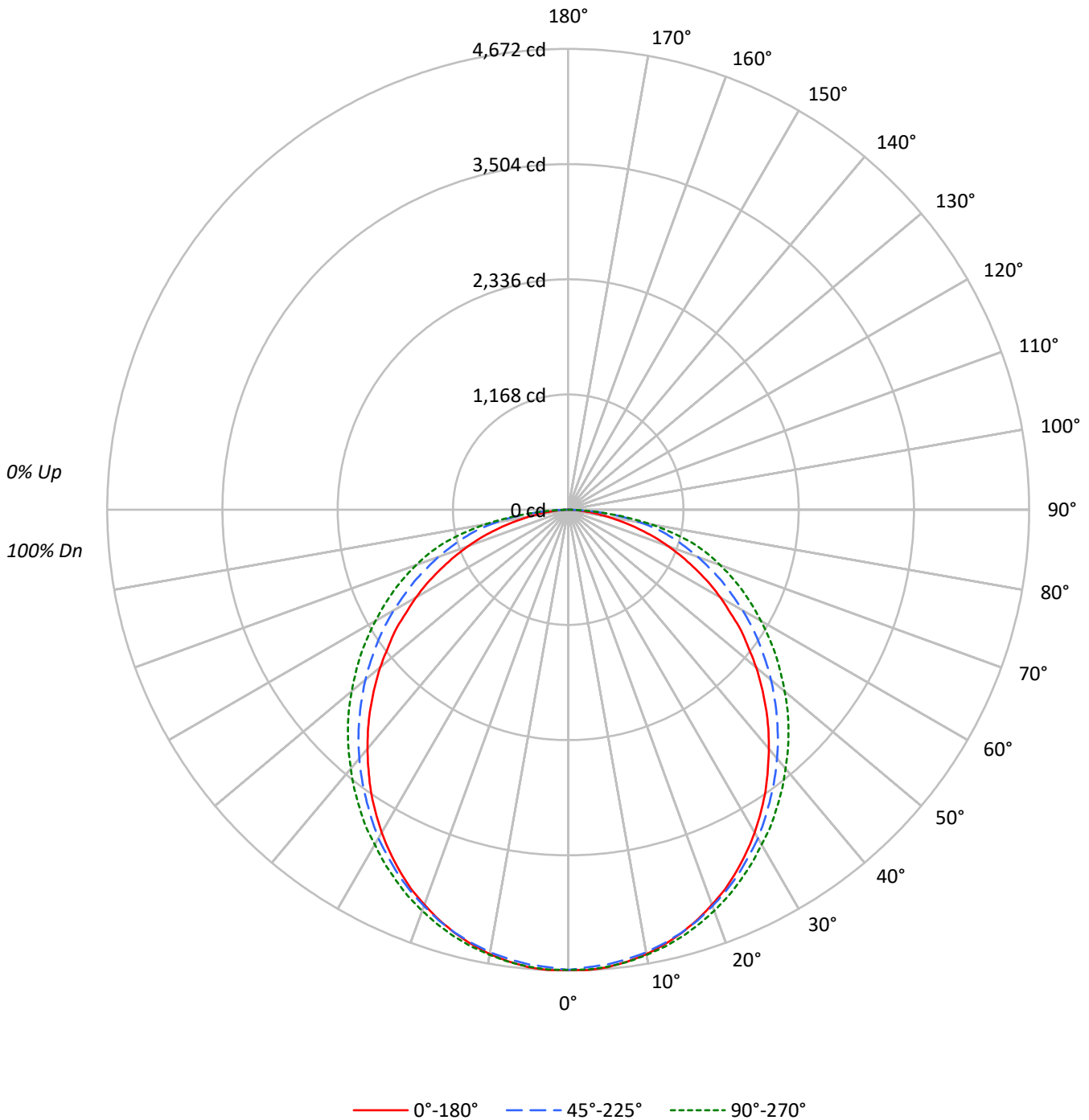
Input Watts (W): 96.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	83	77	95	88	81	76	84	79	74		81	76	72		78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62		71	65	61		68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52		63	57	52		61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35		47	40	35		45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31		43	36	31		42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26		37	30	25		36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6278	6278	6278
5°	6287	6248	6281
10°	6251	6224	6260
15°	6187	6184	6236
20°	6102	6121	6196
25°	6001	6053	6148
30°	5874	5976	6089
35°	5727	5871	6055
40°	5557	5785	6020
45°	5389	5694	6008
50°	5207	5616	5993
55°	5022	5547	6026
60°	4792	5495	6068
65°	4536	5473	6214
70°	4232	5502	6435
75°	3766	5661	6780
80°	3079	5784	6618
85°	2169	5050	5152



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	441.1	3.3
10°-20°	1256.3	9.4
20°-30°	1883.2	14.1
30°-40°	2242.9	16.8
40°-50°	2312.6	17.3
50°-60°	2110.3	15.8
60°-70°	1687.4	12.6
70°-80°	1102.2	8.2
80°-90°	330.9	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°	3580.5	26.8
0°-40°	5823.4	43.6
0°-60°	10246.3	76.7
0°-90°	13366.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13366.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4666	4666	4666	4666	4666	
5°	4655	4646	4626	4655	4650	442
15°	4442	4444	4440	4477	4477	1252
25°	4042	4049	4077	4136	4141	1861
35°	3487	3511	3574	3664	3686	2178
45°	2832	2883	2993	3118	3157	2184
55°	2141	2202	2365	2520	2569	1907
65°	1425	1522	1719	1888	1952	1413
75°	724	845	1089	1265	1304	770
85°	140	252	327	334	334	178
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4665.6	4665.6	4665.6	4665.6	4665.6
2.5°	4672.2	4665.6	4641.5	4670.0	4665.6
5°	4654.7	4645.9	4626.1	4654.7	4650.3
7.5°	4619.5	4615.1	4595.4	4628.3	4623.9
10°	4575.6	4571.2	4555.9	4588.8	4582.2
12.5°	4514.1	4512.0	4501.0	4540.5	4536.1
15°	4441.7	4443.9	4439.5	4476.8	4476.8
17.5°	4358.3	4356.1	4364.8	4411.0	4406.6
20°	4261.7	4263.8	4274.8	4327.5	4327.5
22.5°	4160.7	4158.5	4182.6	4235.3	4239.7
25°	4042.1	4048.7	4077.2	4136.5	4140.9
27.5°	3914.7	3925.7	3960.9	4028.9	4035.5
30°	3780.8	3794.0	3846.7	3910.4	3919.1
32.5°	3633.7	3662.3	3710.6	3791.8	3813.8
35°	3486.6	3510.8	3574.4	3664.5	3686.4
37.5°	3324.1	3363.7	3436.1	3534.9	3563.5
40°	3163.9	3203.4	3293.4	3396.6	3427.3
42.5°	3001.4	3043.1	3146.3	3262.7	3295.6
45°	2832.3	2882.8	2992.6	3117.7	3157.3
47.5°	2658.9	2718.1	2836.7	2972.8	3016.8
50°	2487.6	2546.9	2683.0	2823.5	2863.1
52.5°	2303.2	2377.8	2522.7	2674.2	2713.8
55°	2140.7	2202.2	2364.7	2520.5	2568.8
57.5°	1949.7	2033.1	2206.6	2364.7	2410.8
60°	1780.6	1857.5	2041.9	2202.2	2254.9
62.5°	1609.4	1688.4	1872.8	2055.1	2103.4
65°	1424.9	1521.5	1719.2	1888.2	1951.9
67.5°	1249.3	1350.3	1552.3	1732.3	1798.2
70°	1075.8	1179.0	1398.6	1583.0	1635.7
72.5°	904.6	1012.2	1240.5	1420.6	1482.0
75°	724.5	845.3	1089.0	1264.7	1304.2
77.5°	555.5	689.4	935.3	1053.9	1082.4
80°	397.4	544.5	746.5	832.1	854.1
82.5°	261.3	404.0	557.7	603.8	597.2
85°	140.5	252.5	327.1	333.7	333.7
87.5°	54.9	101.0	103.2	79.0	74.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)