

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: P473795

Luminaire Tested: **24CZ2-105VHE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473795
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-105VHE-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: 10209.5 lumens
Efficiency: N/A
Efficacy: 134.9 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

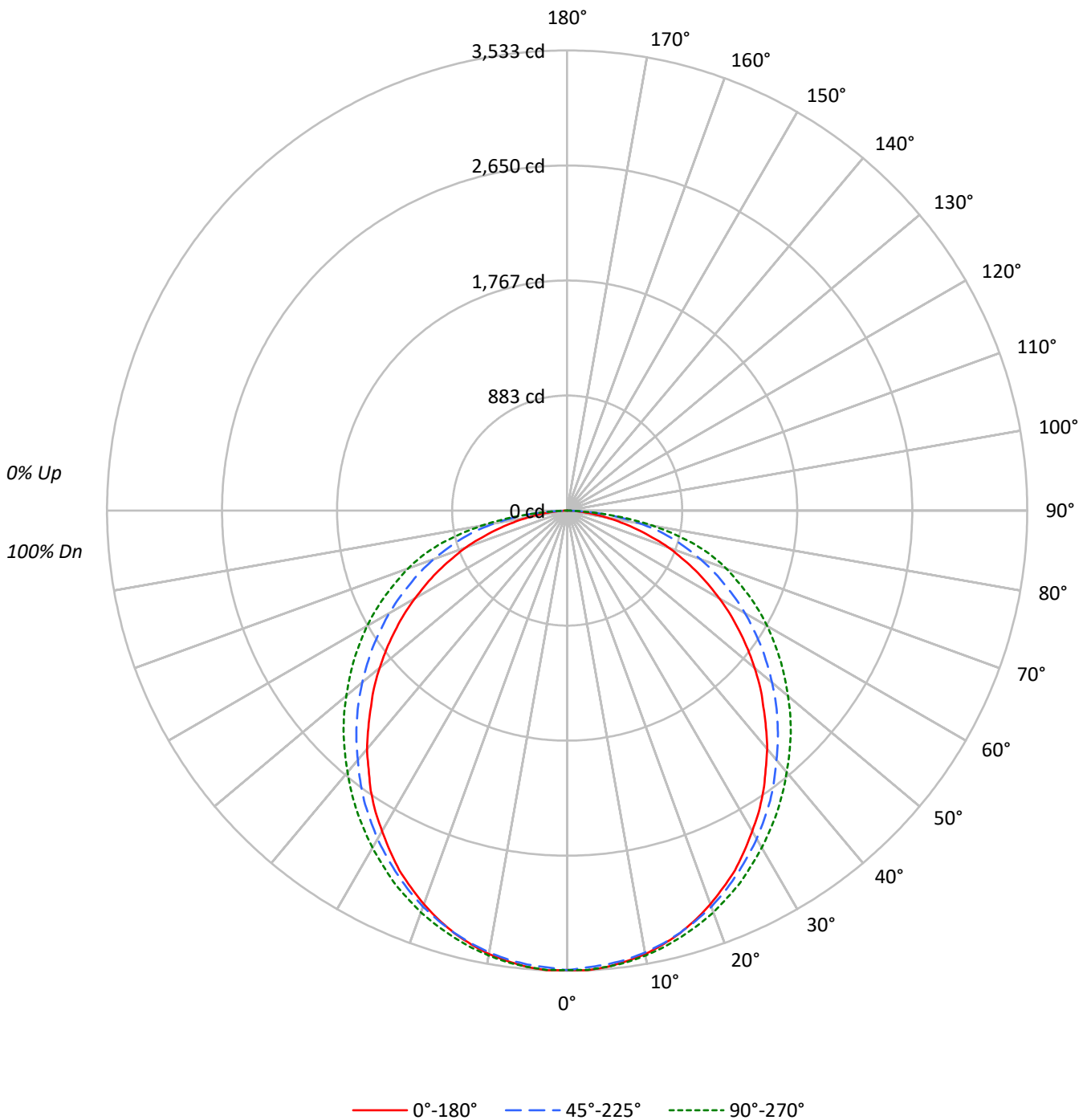
Input Watts (W): 75.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4747	4747	4747
5°	4749	4725	4749
10°	4723	4708	4739
15°	4675	4673	4719
20°	4605	4634	4700
25°	4525	4577	4677
30°	4415	4523	4643
35°	4316	4465	4625
40°	4198	4392	4606
45°	4055	4347	4620
50°	3933	4298	4633
55°	3788	4268	4685
60°	3631	4248	4771
65°	3460	4232	4894
70°	3257	4276	5120
75°	2864	4364	5325
80°	2390	4396	5138
85°	1706	3768	3819



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.5	3.3
10°-20°	950.0	9.3
20°-30°	1425.1	14.0
30°-40°	1701.5	16.7
40°-50°	1762.4	17.3
50°-60°	1622.5	15.9
60°-70°	1308.8	12.8
70°-80°	855.1	8.4
80°-90°	250.7	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°	2708.6	26.5
0°-40°	4410.1	43.2
0°-60°	7794.9	76.3
0°-90°	10209.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10209.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3528	3528	3528	3528	3528	
5°	3516	3513	3498	3518	3516	334
15°	3356	3356	3355	3388	3388	946
25°	3048	3055	3083	3139	3150	1401
35°	2628	2651	2718	2792	2816	1641
45°	2131	2184	2284	2387	2428	1647
55°	1615	1684	1819	1953	1997	1445
65°	1087	1161	1329	1481	1537	1075
75°	551	655	840	985	1024	588
85°	110	191	244	259	247	137
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3528.0	3528.0	3528.0	3528.0	3528.0
2.5°	3533.0	3528.0	3509.9	3531.3	3529.7
5°	3516.5	3513.2	3498.3	3518.1	3516.5
7.5°	3490.1	3488.5	3476.9	3498.3	3498.3
10°	3457.1	3453.8	3445.6	3470.3	3468.7
12.5°	3410.9	3409.3	3404.3	3434.0	3432.4
15°	3356.5	3356.5	3354.9	3387.8	3387.8
17.5°	3290.5	3292.2	3298.8	3336.7	3338.4
20°	3216.3	3222.9	3236.1	3279.0	3282.3
22.5°	3132.2	3145.4	3163.5	3211.4	3216.3
25°	3048.1	3054.7	3082.7	3138.8	3150.3
27.5°	2945.8	2962.3	2998.6	3056.3	3067.9
30°	2841.9	2865.0	2911.2	2970.5	2988.7
32.5°	2739.6	2759.4	2813.9	2881.5	2902.9
35°	2627.5	2650.6	2718.2	2792.4	2815.5
37.5°	2503.8	2540.1	2611.0	2696.7	2721.5
40°	2390.0	2422.9	2500.5	2596.1	2622.5
42.5°	2259.7	2300.9	2394.9	2492.2	2525.2
45°	2131.0	2183.8	2284.4	2386.7	2427.9
47.5°	2010.6	2053.5	2172.2	2287.7	2324.0
50°	1878.7	1928.1	2053.5	2175.5	2213.5
52.5°	1748.3	1807.7	1934.7	2063.4	2104.6
55°	1614.7	1684.0	1819.3	1952.9	1997.4
57.5°	1486.1	1555.4	1695.6	1837.4	1883.6
60°	1349.2	1423.4	1578.5	1715.4	1773.1
62.5°	1217.2	1291.5	1454.8	1603.2	1657.6
65°	1086.9	1161.2	1329.4	1481.1	1537.2
67.5°	951.7	1032.5	1212.3	1359.1	1413.5
70°	828.0	905.5	1086.9	1243.6	1301.4
72.5°	686.1	778.5	963.2	1118.3	1172.7
75°	550.9	654.8	839.5	984.7	1024.3
77.5°	425.5	529.5	714.2	823.0	847.8
80°	308.4	414.0	567.4	643.3	663.1
82.5°	199.6	308.4	410.7	461.8	468.4
85°	110.5	191.3	244.1	259.0	247.4
87.5°	39.6	72.6	70.9	57.7	46.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)