

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: P474395

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474395
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-105VHE-HRP-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8271.1 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

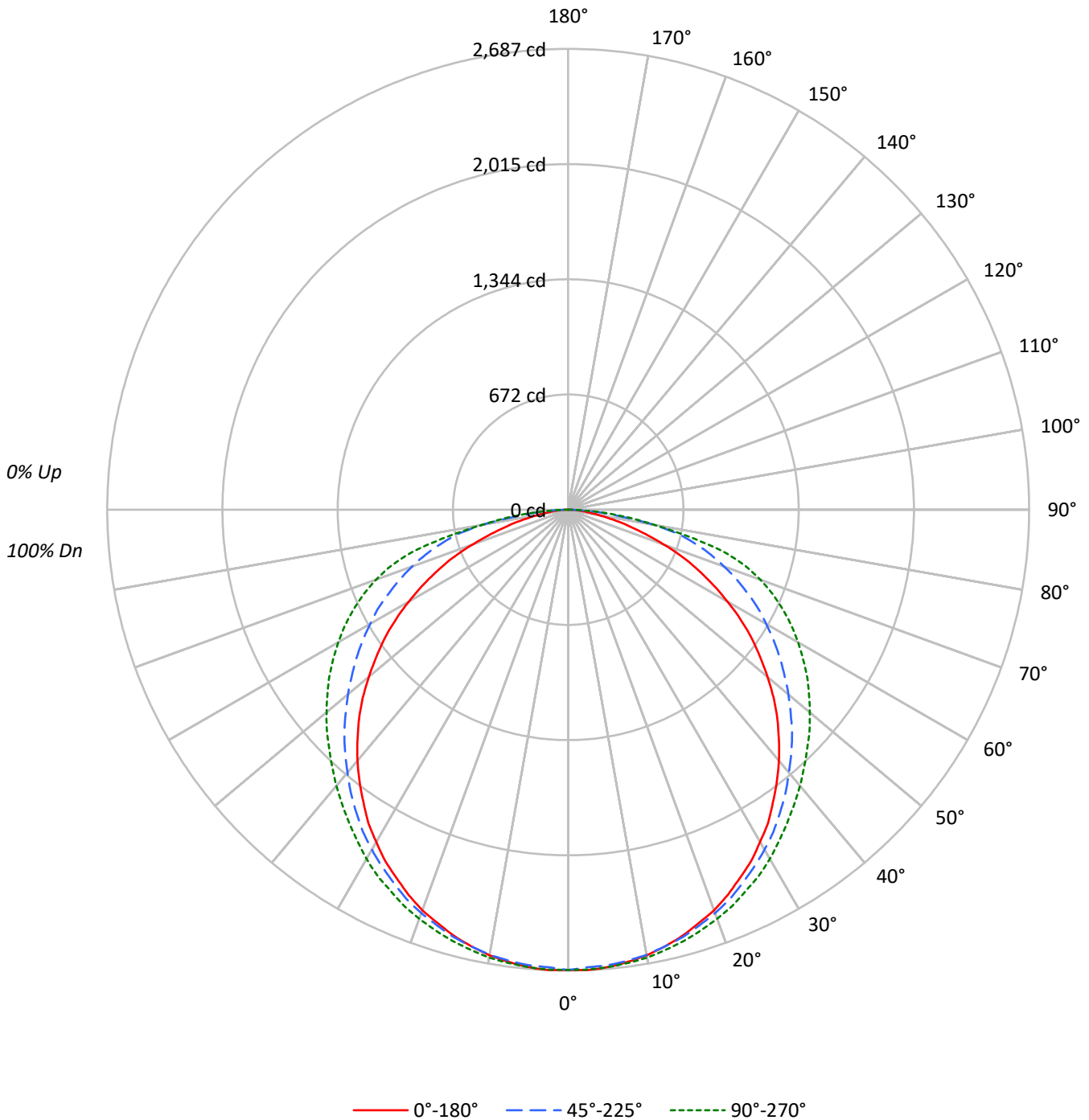
Input Watts (W): 75.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3611	3611	3611
5°	3615	3601	3615
10°	3605	3600	3624
15°	3584	3594	3627
20°	3560	3584	3634
25°	3516	3568	3639
30°	3475	3556	3653
35°	3418	3537	3657
40°	3357	3515	3692
45°	3281	3512	3749
50°	3175	3508	3849
55°	3062	3533	3988
60°	2888	3587	4165
65°	2668	3671	4399
70°	2329	3800	4687
75°	1890	3996	4842
80°	1396	3918	3918
85°	1070	2885	3259



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.2	3.1
10°-20°	730.0	8.8
20°-30°	1111.4	13.4
30°-40°	1349.4	16.3
40°-50°	1425.7	17.2
50°-60°	1345.3	16.3
60°-70°	1118.6	13.5
70°-80°	735.9	8.9
80°-90°	200.6	2.4
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°	2095.6	25.3
0°-40°	3445.0	41.7
0°-60°	6216.0	75.2
0°-90°	8271.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8271.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2684	2684	2684	2684	2684	
5°	2677	2677	2666	2677	2677	254
15°	2573	2576	2580	2604	2604	726
25°	2368	2382	2403	2445	2452	1093
35°	2081	2105	2154	2209	2226	1303
45°	1724	1759	1846	1935	1970	1328
55°	1305	1361	1506	1648	1700	1163
65°	838	935	1153	1323	1382	828
75°	364	530	769	910	932	392
85°	69	152	187	208	211	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2683.5	2683.5	2683.5	2683.5	2683.5
2.5°	2687.1	2683.5	2669.7	2683.5	2683.5
5°	2676.8	2676.8	2666.1	2676.8	2676.8
7.5°	2659.4	2659.4	2652.3	2666.1	2666.1
10°	2638.4	2638.4	2635.2	2652.3	2652.3
12.5°	2607.5	2610.7	2607.5	2628.1	2628.1
15°	2572.6	2576.2	2579.8	2603.9	2603.9
17.5°	2527.9	2534.6	2541.7	2569.1	2572.6
20°	2486.3	2489.5	2503.3	2534.6	2538.2
22.5°	2430.8	2441.2	2458.6	2489.5	2500.1
25°	2368.3	2382.2	2403.1	2444.7	2451.5
27.5°	2309.7	2320.0	2347.7	2392.8	2406.7
30°	2236.8	2254.2	2288.7	2333.8	2351.2
32.5°	2167.5	2184.9	2226.5	2274.8	2288.7
35°	2081.1	2105.3	2153.6	2209.1	2226.5
37.5°	1998.0	2022.2	2081.1	2143.3	2164.3
40°	1911.3	1939.0	2001.5	2074.0	2101.8
42.5°	1817.8	1855.8	1925.1	2004.7	2036.0
45°	1724.3	1759.2	1845.5	1935.4	1970.3
47.5°	1624.1	1665.7	1759.2	1866.5	1908.1
50°	1516.8	1568.7	1676.0	1793.6	1838.8
52.5°	1409.5	1468.1	1589.3	1720.8	1769.5
55°	1305.3	1360.8	1506.1	1648.3	1700.2
57.5°	1191.3	1260.6	1419.8	1571.9	1624.1
60°	1073.3	1149.7	1333.1	1492.3	1547.7
62.5°	955.6	1042.4	1249.9	1409.5	1468.1
65°	838.0	935.0	1153.2	1322.8	1381.7
67.5°	723.6	830.9	1063.0	1232.8	1291.5
70°	592.1	727.1	965.9	1132.3	1191.3
72.5°	470.9	626.9	872.5	1028.5	1080.4
75°	363.6	529.9	768.7	910.5	931.5
77.5°	266.5	432.9	661.4	709.7	713.3
80°	180.2	346.1	505.7	498.6	505.7
82.5°	117.6	259.8	318.4	356.8	360.0
85°	69.3	152.5	186.9	207.9	211.1
87.5°	34.5	51.9	65.7	69.3	76.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)