

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: P474445

Luminaire Tested: **24CZ2-105VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474445
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-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8571.0 lumens
Efficiency: N/A
Efficacy: 113.2 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

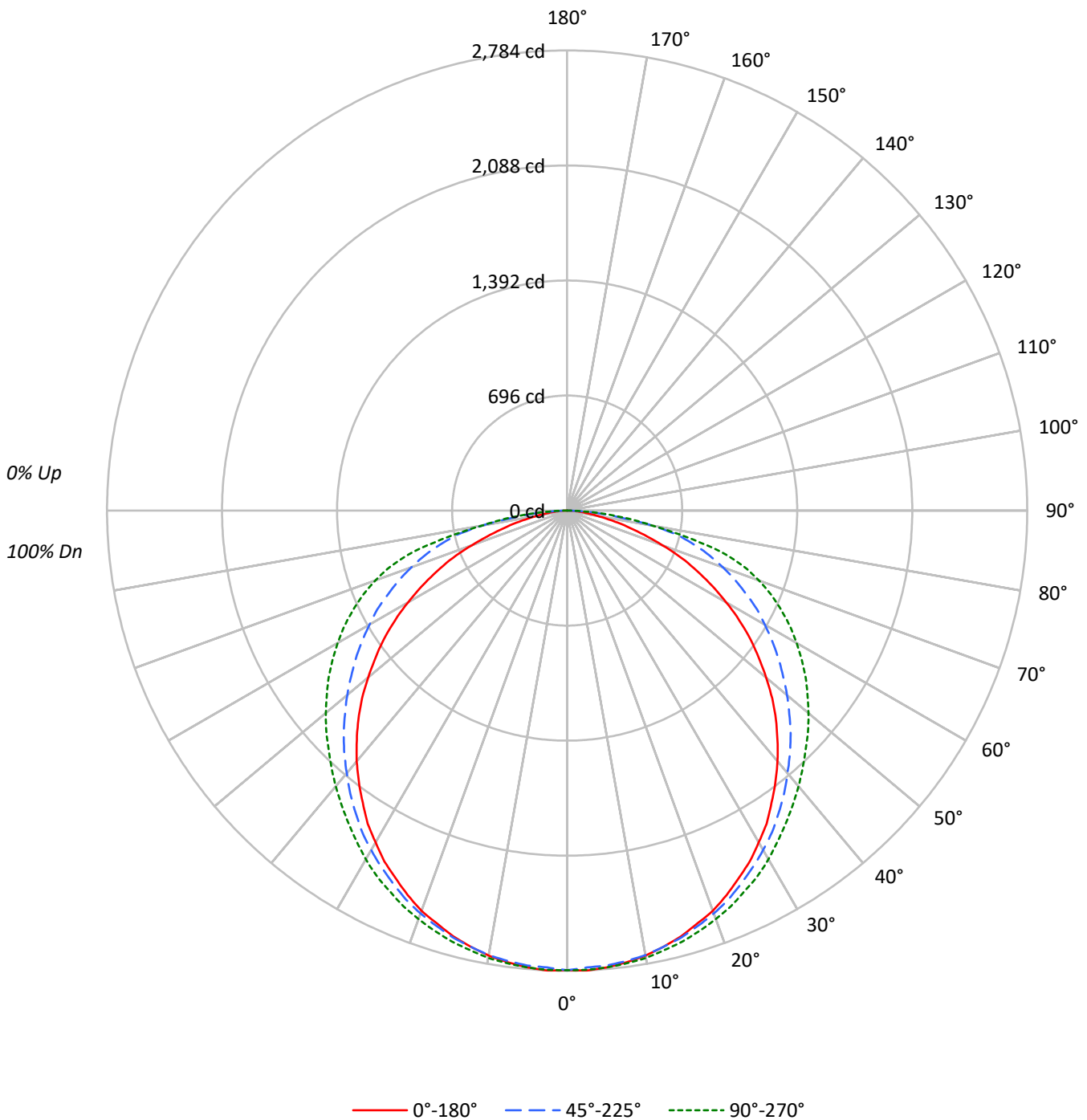
Input Watts (W): 75.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3742	3742	3742
5°	3747	3732	3747
10°	3735	3731	3755
15°	3714	3724	3759
20°	3689	3714	3766
25°	3643	3697	3771
30°	3601	3685	3785
35°	3542	3666	3790
40°	3479	3643	3825
45°	3400	3639	3885
50°	3290	3635	3989
55°	3173	3661	4133
60°	2993	3717	4316
65°	2765	3805	4559
70°	2413	3938	4856
75°	1958	4141	5018
80°	1447	4061	4061
85°	1108	2990	3378



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	263.4	3.1
10°-20°	756.5	8.8
20°-30°	1151.7	13.4
30°-40°	1398.4	16.3
40°-50°	1477.4	17.2
50°-60°	1394.1	16.3
60°-70°	1159.1	13.5
70°-80°	762.6	8.9
80°-90°	207.9	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°	2171.6	25.3
0°-40°	3570.0	41.7
0°-60°	6441.5	75.2
0°-90°	8571.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8571.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2781	2781	2781	2781	2781	
5°	2774	2774	2763	2774	2774	263
15°	2666	2670	2673	2698	2698	752
25°	2454	2469	2490	2533	2540	1132
35°	2157	2182	2232	2289	2307	1350
45°	1787	1823	1912	2006	2042	1376
55°	1353	1410	1561	1708	1762	1205
65°	868	969	1195	1371	1432	858
75°	377	549	797	944	965	406
85°	72	158	194	215	219	88
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2780.9	2780.9	2780.9	2780.9	2780.9
2.5°	2784.5	2780.9	2766.5	2780.9	2780.9
5°	2773.9	2773.9	2762.8	2773.9	2773.9
7.5°	2755.8	2755.8	2748.4	2762.8	2762.8
10°	2734.1	2734.1	2730.8	2748.4	2748.4
12.5°	2702.0	2705.4	2702.0	2723.4	2723.4
15°	2666.0	2669.6	2673.3	2698.4	2698.4
17.5°	2619.6	2626.5	2633.9	2662.3	2666.0
20°	2576.5	2579.8	2594.1	2626.5	2630.2
22.5°	2519.0	2529.7	2547.7	2579.8	2590.8
25°	2454.2	2468.6	2490.3	2533.4	2540.4
27.5°	2393.4	2404.1	2432.8	2479.6	2494.0
30°	2317.9	2336.0	2371.7	2418.5	2436.5
32.5°	2246.1	2264.2	2307.3	2357.3	2371.7
35°	2156.6	2181.7	2231.8	2289.2	2307.3
37.5°	2070.5	2095.5	2156.6	2221.1	2242.8
40°	1980.6	2009.3	2074.1	2149.3	2178.0
42.5°	1883.7	1923.1	1995.0	2077.4	2109.9
45°	1786.9	1823.0	1912.5	2005.6	2041.7
47.5°	1683.0	1726.1	1823.0	1934.2	1977.3
50°	1571.8	1625.6	1736.8	1858.7	1905.5
52.5°	1460.6	1521.4	1646.9	1783.2	1833.6
55°	1352.7	1410.1	1560.8	1708.1	1761.8
57.5°	1234.5	1306.3	1471.3	1628.9	1683.0
60°	1112.2	1191.4	1381.4	1546.4	1603.8
62.5°	990.3	1080.2	1295.2	1460.6	1521.4
65°	868.4	968.9	1195.1	1370.7	1431.9
67.5°	749.8	861.0	1101.5	1277.6	1338.3
70°	613.5	753.5	1001.0	1173.3	1234.5
72.5°	488.0	649.6	904.1	1065.8	1119.6
75°	376.7	549.1	796.6	943.5	965.3
77.5°	276.2	448.6	685.4	735.4	739.1
80°	186.7	358.7	524.1	516.7	524.1
82.5°	121.9	269.2	330.0	369.7	373.1
85°	71.8	158.0	193.7	215.4	218.8
87.5°	35.7	53.8	68.1	71.8	78.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)