

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: P474045

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474045
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-105VHE-S-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10791.6 lumens
Efficiency: N/A
Efficacy: 142.6 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

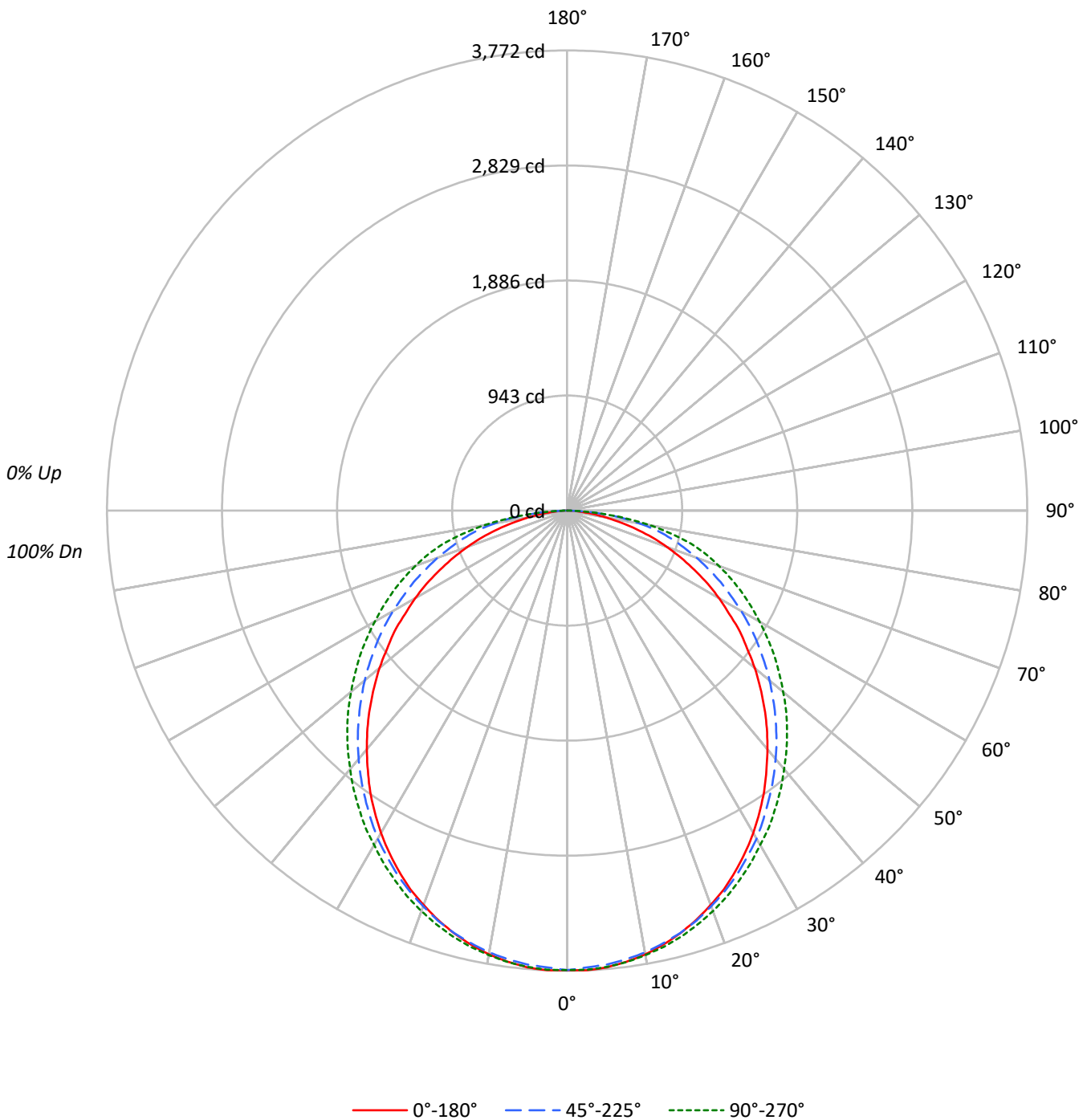
Input Watts (W): 75.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474045

CATALOG NUMBER: 24CZ2-105VHE-S-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474045

CATALOG NUMBER: 24CZ2-105VHE-S-UNV-L835-CD1-U

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	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					100			
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83					83			
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68					68			
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57					57			
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37					37			
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32					32			
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26					26			
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5068	5068	5068
5°	5076	5044	5071
10°	5047	5025	5054
15°	4995	4993	5035
20°	4926	4942	5003
25°	4845	4887	4963
30°	4742	4825	4916
35°	4624	4740	4889
40°	4486	4670	4860
45°	4351	4597	4850
50°	4204	4534	4838
55°	4054	4478	4865
60°	3869	4436	4899
65°	3663	4419	5017
70°	3417	4442	5195
75°	3041	4571	5474
80°	2486	4670	5342
85°	1751	4077	4159



TEST NUMBER: P474045

CATALOG NUMBER: 24CZ2-105VHE-S-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.1	3.3
10°-20°	1014.2	9.4
20°-30°	1520.4	14.1
30°-40°	1810.8	16.8
40°-50°	1867.1	17.3
50°-60°	1703.7	15.8
60°-70°	1362.3	12.6
70°-80°	889.9	8.2
80°-90°	267.2	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°	2890.7	26.8
0°-40°	4701.5	43.6
0°-60°	8272.3	76.7
0°-90°	10791.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10791.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3767	3767	3767	3767	3767	
5°	3758	3751	3735	3758	3754	357
15°	3586	3588	3584	3614	3614	1011
25°	3263	3269	3292	3340	3343	1502
35°	2815	2834	2886	2958	2976	1758
45°	2287	2327	2416	2517	2549	1763
55°	1728	1778	1909	2035	2074	1539
65°	1150	1228	1388	1524	1576	1141
75°	585	682	879	1021	1053	622
85°	113	204	264	269	269	144
90°	0	0	0	0	0	



TEST NUMBER: P474045

CATALOG NUMBER: 24CZ2-105VHE-S-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3766.8	3766.8	3766.8	3766.8	3766.8
2.5°	3772.1	3766.8	3747.3	3770.3	3766.8
5°	3757.9	3750.8	3734.9	3757.9	3754.4
7.5°	3729.6	3726.0	3710.1	3736.6	3733.1
10°	3694.1	3690.6	3678.1	3704.7	3699.4
12.5°	3644.5	3642.7	3633.8	3665.7	3662.2
15°	3586.0	3587.7	3584.2	3614.3	3614.3
17.5°	3518.6	3516.8	3523.9	3561.2	3557.6
20°	3440.6	3442.4	3451.3	3493.8	3493.8
22.5°	3359.1	3357.3	3376.8	3419.3	3422.9
25°	3263.4	3268.7	3291.7	3339.6	3343.1
27.5°	3160.5	3169.4	3197.8	3252.7	3258.0
30°	3052.4	3063.1	3105.6	3157.0	3164.1
32.5°	2933.7	2956.7	2995.7	3061.3	3079.0
35°	2814.9	2834.4	2885.8	2958.5	2976.2
37.5°	2683.7	2715.6	2774.1	2853.9	2876.9
40°	2554.3	2586.2	2658.9	2742.2	2767.0
42.5°	2423.1	2456.8	2540.1	2634.1	2660.7
45°	2286.7	2327.4	2416.1	2517.1	2549.0
47.5°	2146.6	2194.5	2290.2	2400.1	2435.6
50°	2008.4	2056.2	2166.1	2279.6	2311.5
52.5°	1859.5	1919.7	2036.7	2159.0	2190.9
55°	1728.3	1777.9	1909.1	2034.9	2073.9
57.5°	1574.1	1641.4	1781.5	1909.1	1946.3
60°	1437.6	1499.6	1648.5	1777.9	1820.5
62.5°	1299.3	1363.1	1512.0	1659.2	1698.2
65°	1150.4	1228.4	1387.9	1524.4	1575.8
67.5°	1008.6	1090.2	1253.2	1398.6	1451.8
70°	868.6	951.9	1129.1	1278.0	1320.6
72.5°	730.3	817.2	1001.5	1146.9	1196.5
75°	585.0	682.5	879.2	1021.0	1052.9
77.5°	448.5	556.6	755.1	850.8	873.9
80°	320.8	439.6	602.7	671.8	689.5
82.5°	210.9	326.2	450.2	487.5	482.1
85°	113.4	203.8	264.1	269.4	269.4
87.5°	44.3	81.5	83.3	63.8	60.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)