

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: P473895

Luminaire Tested: **24CZ2-105VHE-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473895
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-105VHE-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

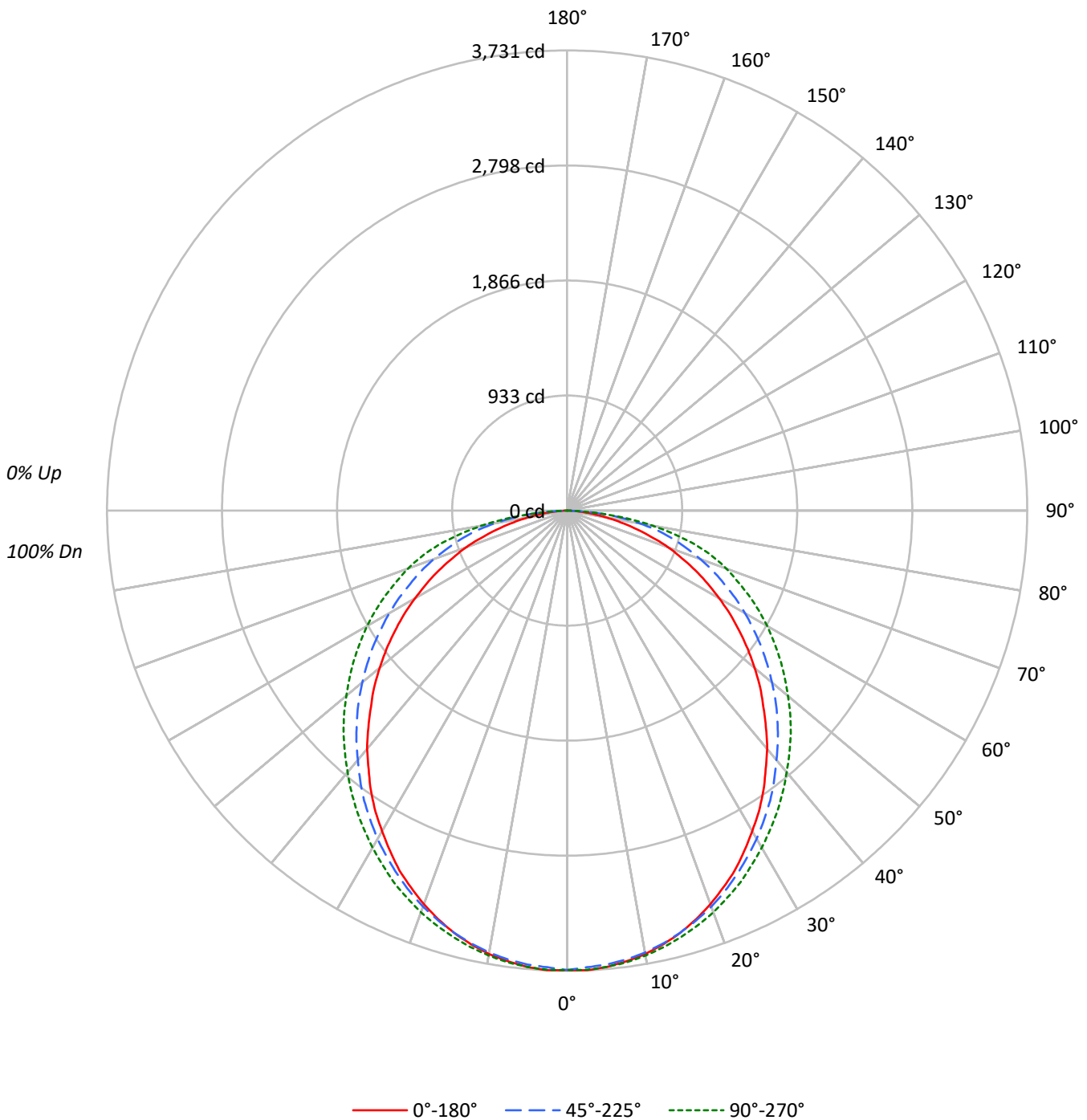
Lumens per Lamp: N/A
Luminaire Lumens: 10780.9 lumens
Efficiency: N/A
Efficacy: 142.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	5013	5013	5013
5°	5015	4989	5015
10°	4988	4971	5004
15°	4937	4935	4983
20°	4863	4893	4963
25°	4778	4833	4939
30°	4662	4776	4903
35°	4557	4715	4883
40°	4433	4638	4864
45°	4282	4590	4878
50°	4153	4539	4892
55°	4000	4506	4948
60°	3834	4485	5038
65°	3654	4469	5168
70°	3439	4515	5406
75°	3024	4609	5623
80°	2524	4642	5425
85°	1802	3980	4034



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.2	3.3
10°-20°	1003.1	9.3
20°-30°	1504.9	14.0
30°-40°	1796.7	16.7
40°-50°	1861.0	17.3
50°-60°	1713.3	15.9
60°-70°	1382.0	12.8
70°-80°	903.0	8.4
80°-90°	264.7	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°	2860.2	26.5
0°-40°	4656.8	43.2
0°-60°	8231.1	76.3
0°-90°	10780.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10780.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3726	3726	3726	3726	3726	
5°	3713	3710	3694	3715	3713	352
15°	3544	3544	3543	3577	3577	999
25°	3219	3226	3255	3314	3327	1480
35°	2774	2799	2870	2949	2973	1733
45°	2250	2306	2412	2520	2564	1739
55°	1705	1778	1921	2062	2109	1526
65°	1148	1226	1404	1564	1623	1135
75°	582	691	886	1040	1082	621
85°	117	202	258	273	261	145
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3725.5	3725.5	3725.5	3725.5	3725.5
2.5°	3730.7	3725.5	3706.3	3728.9	3727.2
5°	3713.3	3709.8	3694.1	3715.0	3713.3
7.5°	3685.4	3683.7	3671.5	3694.1	3694.1
10°	3650.6	3647.1	3638.4	3664.5	3662.8
12.5°	3601.8	3600.1	3594.8	3626.2	3624.4
15°	3544.3	3544.3	3542.6	3577.4	3577.4
17.5°	3474.7	3476.4	3483.4	3523.4	3525.2
20°	3396.3	3403.2	3417.2	3462.5	3465.9
22.5°	3307.5	3321.4	3340.5	3391.1	3396.3
25°	3218.6	3225.6	3255.2	3314.4	3326.6
27.5°	3110.6	3128.1	3166.4	3227.3	3239.5
30°	3000.9	3025.3	3074.1	3136.8	3155.9
32.5°	2892.9	2913.8	2971.3	3042.7	3065.4
35°	2774.5	2798.9	2870.3	2948.7	2973.1
37.5°	2643.9	2682.2	2757.1	2847.7	2873.8
40°	2523.7	2558.5	2640.4	2741.4	2769.3
42.5°	2386.1	2429.6	2528.9	2631.7	2666.5
45°	2250.3	2306.0	2412.2	2520.2	2563.8
47.5°	2123.1	2168.4	2293.8	2415.7	2454.0
50°	1983.8	2036.0	2168.4	2297.3	2337.3
52.5°	1846.2	1908.9	2043.0	2178.8	2222.4
55°	1705.1	1778.3	1921.1	2062.2	2109.2
57.5°	1569.3	1642.4	1790.5	1940.2	1989.0
60°	1424.7	1503.1	1666.8	1811.4	1872.3
62.5°	1285.4	1363.7	1536.2	1692.9	1750.4
65°	1147.8	1226.1	1403.8	1564.0	1623.2
67.5°	1005.0	1090.3	1280.1	1435.1	1492.6
70°	874.3	956.2	1147.8	1313.2	1374.2
72.5°	724.5	822.1	1017.1	1180.9	1238.3
75°	581.7	691.4	886.5	1039.8	1081.6
77.5°	449.4	559.1	754.1	869.1	895.2
80°	325.7	437.2	599.1	679.3	700.2
82.5°	210.7	325.7	433.7	487.7	494.6
85°	116.7	202.0	257.8	273.4	261.3
87.5°	41.8	76.6	74.9	61.0	48.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)