

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: P474104

Luminaire Tested: **24CZ2-150VHE-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474104
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-150VHE-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15619.9 lumens
Efficiency: N/A
Efficacy: 142.4 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

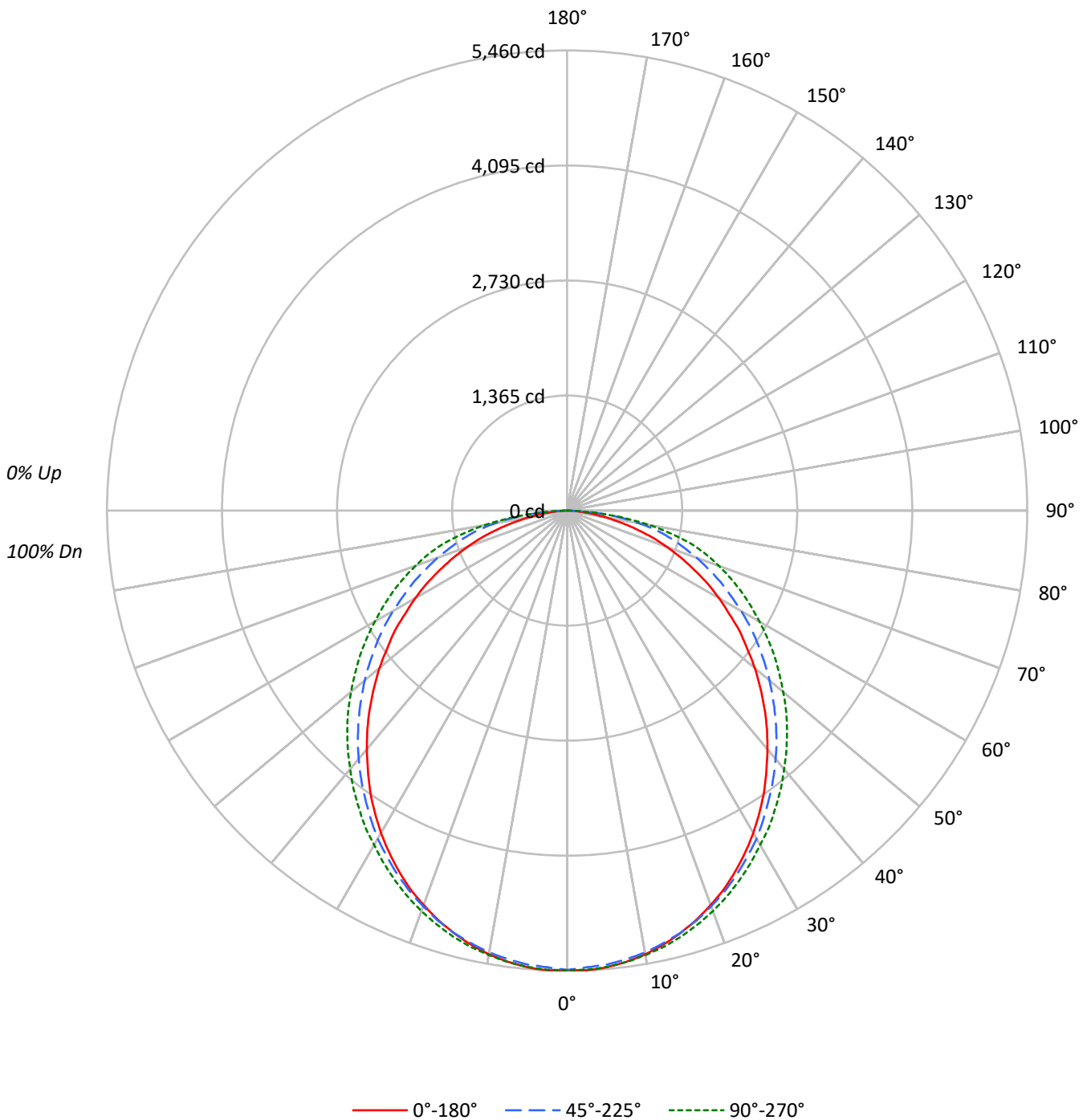
Input Watts (W): 109.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474104

CATALOG NUMBER: 24CZ2-150VHE-S-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474104

CATALOG NUMBER: 24CZ2-150VHE-S-UNV-L840-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	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	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7336	7336	7336
5°	7346	7301	7339
10°	7305	7274	7316
15°	7230	7226	7287
20°	7131	7153	7241
25°	7012	7073	7184
30°	6864	6984	7115
35°	6692	6861	7076
40°	6494	6760	7034
45°	6298	6654	7020
50°	6085	6563	7003
55°	5868	6482	7042
60°	5599	6421	7090
65°	5301	6396	7262
70°	4946	6429	7519
75°	4402	6616	7923
80°	3598	6759	7733
85°	2535	5902	6021



TEST NUMBER: P474104

CATALOG NUMBER: 24CZ2-150VHE-S-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	515.4	3.3
10°-20°	1468.0	9.4
20°-30°	2200.6	14.1
30°-40°	2620.9	16.8
40°-50°	2702.4	17.3
50°-60°	2466.0	15.8
60°-70°	1971.9	12.6
70°-80°	1288.0	8.2
80°-90°	386.7	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°	4184.0	26.8
0°-40°	6805.0	43.6
0°-60°	11973.3	76.7
0°-90°	15619.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15619.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5452	5452	5452	5452	5452	
5°	5439	5429	5406	5439	5434	516
15°	5190	5193	5188	5231	5231	1463
25°	4723	4731	4764	4834	4839	2175
35°	4074	4102	4177	4282	4308	2545
45°	3310	3369	3497	3643	3689	2552
55°	2502	2573	2763	2945	3002	2228
65°	1665	1778	2009	2206	2281	1651
75°	847	988	1273	1478	1524	900
85°	164	295	382	390	390	208
90°	0	0	0	0	0	



TEST NUMBER: P474104

CATALOG NUMBER: 24CZ2-150VHE-S-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5452.1	5452.1	5452.1	5452.1	5452.1
2.5°	5459.7	5452.1	5423.8	5457.2	5452.1
5°	5439.2	5429.0	5405.9	5439.2	5434.1
7.5°	5398.2	5393.0	5369.9	5408.4	5403.3
10°	5346.9	5341.7	5323.8	5362.3	5354.6
12.5°	5275.0	5272.5	5259.6	5305.8	5300.7
15°	5190.4	5192.9	5187.8	5231.4	5231.4
17.5°	5092.9	5090.3	5100.6	5154.4	5149.3
20°	4980.0	4982.5	4995.4	5056.9	5056.9
22.5°	4861.9	4859.4	4887.6	4949.2	4954.3
25°	4723.4	4731.1	4764.5	4833.7	4838.9
27.5°	4574.6	4587.4	4628.5	4708.0	4715.7
30°	4418.1	4433.5	4495.1	4569.5	4579.7
32.5°	4246.2	4279.5	4336.0	4430.9	4456.6
35°	4074.3	4102.5	4176.9	4282.1	4307.8
37.5°	3884.4	3930.6	4015.3	4130.7	4164.1
40°	3697.1	3743.3	3848.5	3969.1	4005.0
42.5°	3507.3	3556.0	3676.6	3812.6	3851.1
45°	3309.7	3368.7	3497.0	3643.3	3689.4
47.5°	3107.0	3176.3	3314.8	3473.9	3525.2
50°	2906.9	2976.2	3135.2	3299.5	3345.6
52.5°	2691.4	2778.6	2948.0	3125.0	3171.2
55°	2501.5	2573.4	2763.2	2945.4	3001.8
57.5°	2278.3	2375.8	2578.5	2763.2	2817.1
60°	2080.8	2170.6	2386.1	2573.4	2634.9
62.5°	1880.6	1973.0	2188.5	2401.5	2457.9
65°	1665.1	1778.0	2008.9	2206.5	2280.9
67.5°	1459.9	1577.9	1813.9	2024.3	2101.3
70°	1257.2	1377.8	1634.3	1849.8	1911.4
72.5°	1057.1	1182.8	1449.6	1660.0	1731.8
75°	846.7	987.8	1272.6	1477.8	1524.0
77.5°	649.1	805.6	1093.0	1231.5	1264.9
80°	464.4	636.3	872.3	972.4	998.0
82.5°	305.3	472.1	651.7	705.6	697.9
85°	164.2	295.1	382.3	390.0	390.0
87.5°	64.1	118.0	120.6	92.4	87.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)