

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: P474831

Luminaire Tested: **22CZ2-24VHE-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474831
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-24VHE-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

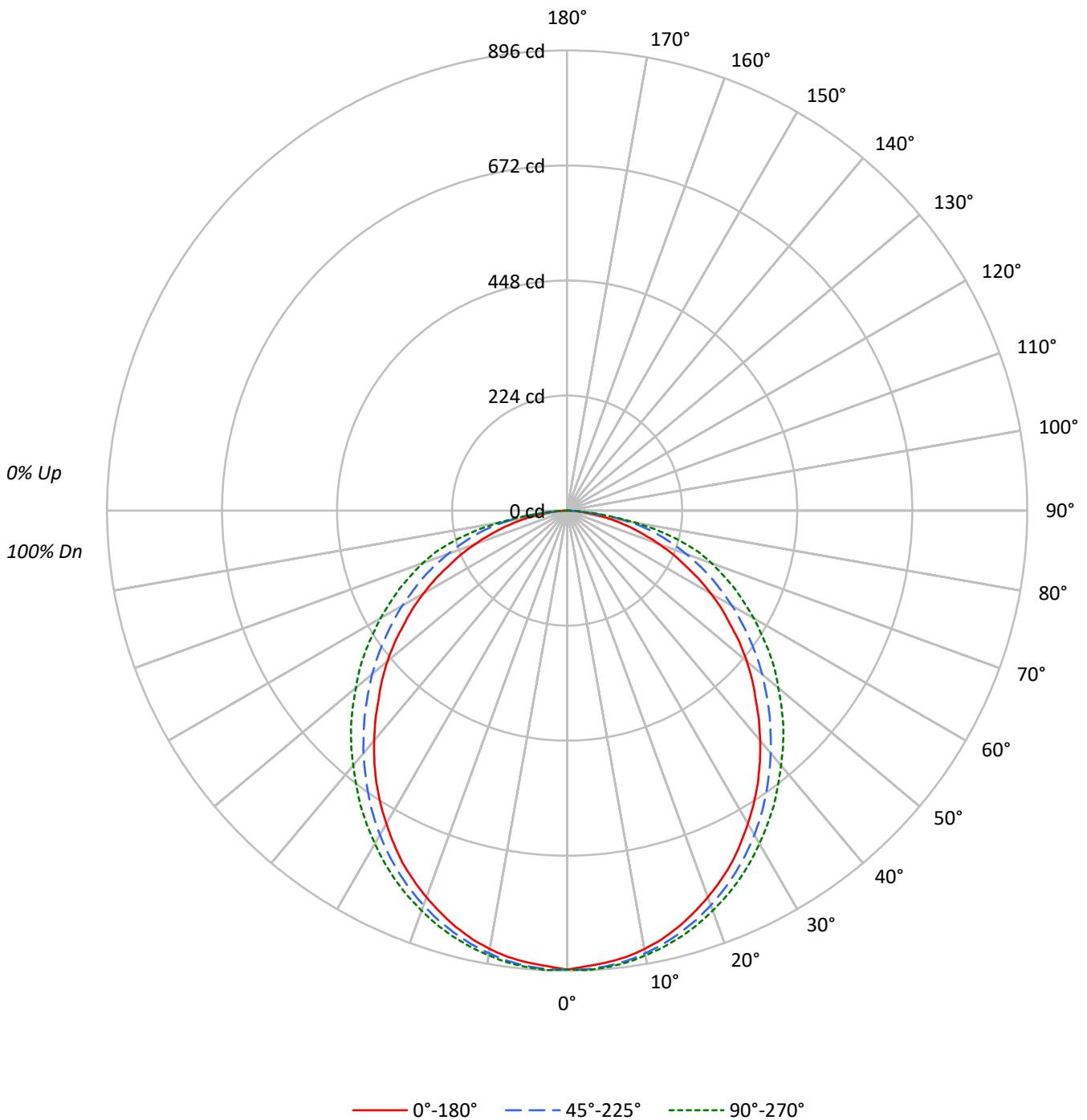
Lumens per Lamp: N/A
Luminaire Lumens: 2463.9 lumens
Efficiency: N/A
Efficacy: 149.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.5
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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2404	2404	2404
5°	2387	2405	2411
10°	2369	2392	2403
15°	2337	2370	2392
20°	2295	2342	2374
25°	2249	2307	2355
30°	2188	2265	2327
35°	2126	2217	2304
40°	2054	2167	2275
45°	1975	2118	2265
50°	1912	2075	2247
55°	1822	2030	2252
60°	1741	1995	2259
65°	1618	1969	2294
70°	1496	1942	2352
75°	1337	1933	2365
80°	1122	1832	2066
85°	868	1254	1173



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.4	3.4
10°-20°	239.6	9.7
20°-30°	357.3	14.5
30°-40°	421.8	17.1
40°-50°	429.9	17.4
50°-60°	387.7	15.7
60°-70°	304.7	12.4
70°-80°	190.8	7.7
80°-90°	47.6	1.9
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°	681.4	27.7
0°-40°	1103.2	44.8
0°-60°	1920.8	78.0
0°-90°	2463.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2463.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	884	886	890	892	892	84
15°	839	842	851	857	859	236
25°	758	763	777	789	793	348
35°	647	656	675	694	701	404
45°	519	531	557	584	595	402
55°	388	400	433	466	480	349
65°	254	270	309	344	360	253
75°	129	148	186	219	228	137
85°	28	36	41	41	38	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	893.5	893.5	893.5	893.5	893.5
2.5°	887.8	889.9	894.0	895.6	895.6
5°	883.6	885.7	890.4	892.5	892.5
7.5°	876.9	878.9	884.7	887.3	887.8
10°	867.0	869.6	875.3	879.5	879.5
12.5°	854.5	857.1	864.4	869.6	870.1
15°	838.8	842.5	850.8	857.1	858.6
17.5°	820.6	826.3	835.7	843.5	845.1
20°	801.4	807.1	818.0	826.9	829.0
22.5°	780.0	785.2	798.2	809.2	811.8
25°	757.6	763.3	776.9	788.9	793.0
27.5°	731.1	737.8	754.0	767.5	771.7
30°	704.0	712.3	729.0	744.1	748.8
32.5°	676.4	684.2	702.9	719.1	725.3
35°	647.2	655.6	674.8	693.6	701.4
37.5°	616.5	624.8	645.7	667.0	674.3
40°	584.7	594.6	617.0	639.9	647.7
42.5°	552.5	562.9	586.3	611.8	622.2
45°	519.1	530.6	556.6	583.7	595.2
47.5°	488.9	498.3	525.4	555.1	566.0
50°	456.7	465.5	495.7	525.4	536.8
52.5°	423.8	432.2	464.5	495.7	509.8
55°	388.4	400.4	432.7	466.0	480.1
57.5°	357.2	368.1	401.5	435.3	448.8
60°	323.4	334.8	370.7	405.1	419.7
62.5°	289.5	302.0	338.5	375.4	389.0
65°	254.1	269.7	309.3	343.7	360.3
67.5°	223.9	239.0	278.1	314.0	328.6
70°	190.1	207.8	246.8	283.3	298.9
72.5°	158.3	176.0	216.1	252.5	268.2
75°	128.6	147.9	185.9	219.2	227.5
77.5°	100.0	118.2	156.2	175.5	184.3
80°	72.4	90.1	118.2	131.2	133.3
82.5°	48.9	64.0	80.2	83.8	81.7
85°	28.1	35.9	40.6	40.6	38.0
87.5°	11.5	11.5	9.9	6.2	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)