

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: P474936

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

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474936
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-24-S-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

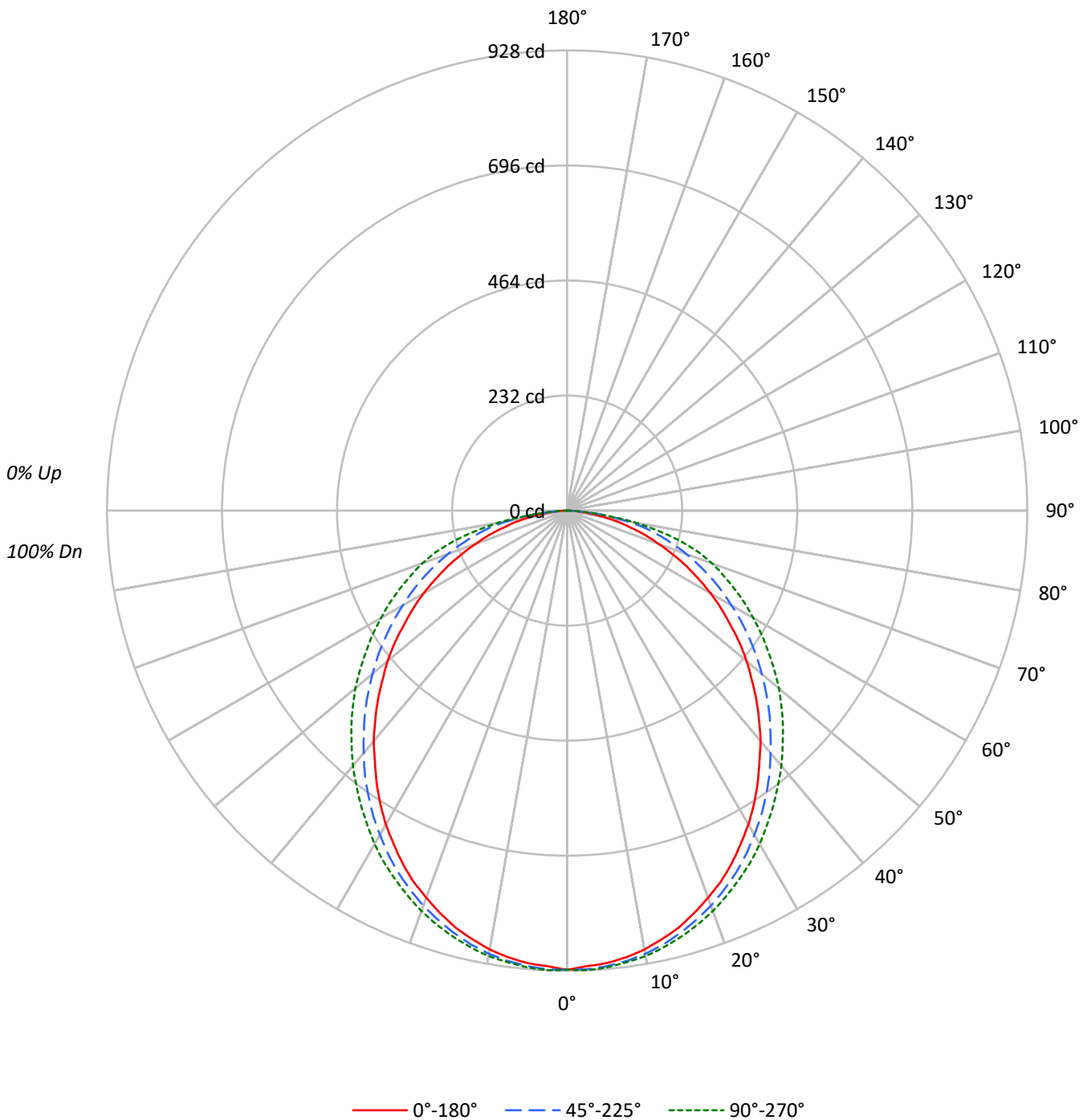
Lumens per Lamp: N/A
Luminaire Lumens: 2550.8 lumens
Efficiency: N/A
Efficacy: 137.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 18.5
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



TEST NUMBER: P474936
CATALOG NUMBER: 22CZ2-24-S-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474936

CATALOG NUMBER: 22CZ2-24-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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	88	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	74	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	32	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2492	2492	2492
5°	2475	2491	2498
10°	2456	2479	2493
15°	2425	2457	2478
20°	2379	2429	2461
25°	2331	2392	2436
30°	2271	2346	2413
35°	2200	2298	2383
40°	2132	2242	2361
45°	2053	2194	2342
50°	1979	2145	2334
55°	1886	2103	2323
60°	1801	2060	2332
65°	1690	2036	2366
70°	1544	2011	2443
75°	1386	1996	2445
80°	1167	1884	2171
85°	877	1278	1183



TEST NUMBER: P474936

CATALOG NUMBER: 22CZ2-24-S-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.5	3.4
10°-20°	248.4	9.7
20°-30°	370.3	14.5
30°-40°	436.9	17.1
40°-50°	445.2	17.5
50°-60°	401.5	15.7
60°-70°	315.3	12.4
70°-80°	197.1	7.7
80°-90°	48.6	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°	706.1	27.7
0°-40°	1143.1	44.8
0°-60°	1989.8	78.0
0°-90°	2550.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2550.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	926	926	926	926	926	
5°	916	918	922	924	925	87
15°	870	874	882	888	890	245
25°	785	790	806	817	820	361
35°	670	679	699	718	725	419
45°	540	549	576	604	615	416
55°	402	415	448	483	495	360
65°	265	280	320	356	372	262
75°	133	152	192	225	235	143
85°	28	36	41	41	38	35
90°	0	0	0	0	0	



TEST NUMBER: P474936

CATALOG NUMBER: 22CZ2-24-S-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	925.9	925.9	925.9	925.9	925.9
2.5°	919.8	921.6	925.9	927.8	927.8
5°	916.1	917.9	922.2	924.1	924.7
7.5°	908.6	911.1	916.1	918.5	918.5
10°	898.8	901.9	907.4	911.1	912.4
12.5°	885.2	888.9	896.3	900.6	901.9
15°	870.4	873.5	882.1	888.3	889.5
17.5°	851.2	856.2	865.4	873.5	875.3
20°	830.9	836.4	848.2	857.4	859.3
22.5°	809.9	814.2	827.2	838.3	840.7
25°	785.2	789.5	805.6	817.3	820.4
27.5°	758.0	765.4	781.5	795.1	800.0
30°	730.9	738.3	754.9	771.0	776.5
32.5°	701.2	709.3	728.4	745.1	750.6
35°	669.8	679.0	699.4	718.5	725.3
37.5°	637.0	647.5	670.4	690.7	698.2
40°	606.8	614.2	638.3	661.7	672.2
42.5°	572.8	582.7	606.8	633.3	643.2
45°	539.5	548.8	576.5	604.3	615.4
47.5°	504.9	516.7	544.4	575.3	586.4
50°	472.8	482.7	512.3	545.1	557.4
52.5°	438.3	448.8	480.9	514.8	525.9
55°	401.9	414.8	448.2	482.7	495.1
57.5°	368.5	380.9	416.1	451.9	464.8
60°	334.6	346.9	382.7	419.1	433.3
62.5°	298.8	313.0	351.9	387.0	403.1
65°	265.4	279.6	319.8	355.6	371.6
67.5°	230.2	246.9	287.0	324.7	340.7
70°	196.3	216.1	255.6	292.6	310.5
72.5°	166.1	182.1	223.5	262.3	277.2
75°	133.3	151.9	192.0	224.7	235.2
77.5°	105.6	121.6	159.9	181.5	188.3
80°	75.3	93.2	121.6	134.6	140.1
82.5°	50.0	64.8	82.7	85.2	84.0
85°	28.4	36.4	41.4	40.7	38.3
87.5°	11.1	12.3	9.3	5.6	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)