

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: P474930

Luminaire Tested: **22CZ2-90VHE-S-UNV-L835-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474930
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-90VHE-S-UNV-L835-CD1-U
Description: 2'X2' 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: 9170.3 lumens
Efficiency: N/A
Efficacy: 137.5 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

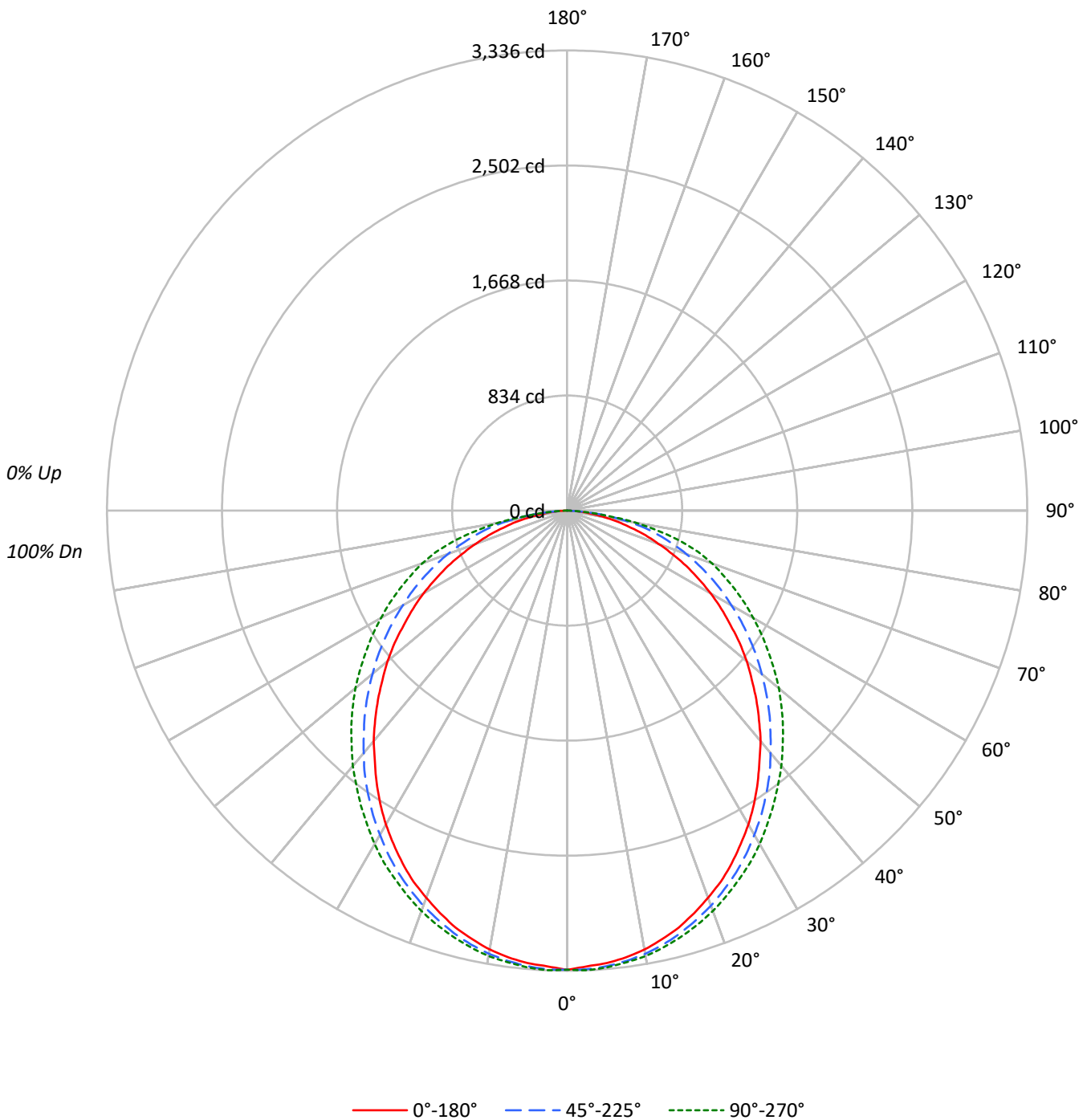
Input Watts (W): 66.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474930

CATALOG NUMBER: 22CZ2-90VHE-S-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474930

CATALOG NUMBER: 22CZ2-90VHE-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	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	86	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°	8958	8958	8958
5°	8896	8956	8980
10°	8829	8914	8963
15°	8717	8835	8909
20°	8554	8732	8846
25°	8381	8599	8757
30°	8165	8433	8675
35°	7910	8260	8566
40°	7663	8061	8489
45°	7381	7888	8420
50°	7116	7711	8390
55°	6778	7559	8350
60°	6473	7405	8385
65°	6076	7320	8507
70°	5552	7229	8783
75°	4984	7176	8791
80°	4195	6775	7807
85°	3152	4591	4248



TEST NUMBER: P474930

CATALOG NUMBER: 22CZ2-90VHE-S-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.4	3.4
10°-20°	892.9	9.7
20°-30°	1331.3	14.5
30°-40°	1570.9	17.1
40°-50°	1600.5	17.5
50°-60°	1443.4	15.7
60°-70°	1133.6	12.4
70°-80°	708.7	7.7
80°-90°	174.7	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°	2538.6	27.7
0°-40°	4109.5	44.8
0°-60°	7153.4	78.0
0°-90°	9170.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9170.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3329	3329	3329	3329	3329	
5°	3293	3300	3316	3322	3324	312
15°	3129	3140	3171	3194	3198	881
25°	2823	2838	2896	2938	2949	1299
35°	2408	2441	2514	2583	2608	1506
45°	1940	1973	2073	2173	2213	1496
55°	1445	1491	1611	1735	1780	1296
65°	954	1005	1150	1278	1336	942
75°	479	546	690	808	846	512
85°	102	131	149	146	138	124
90°	0	0	0	0	0	



TEST NUMBER: P474930

CATALOG NUMBER: 22CZ2-90VHE-S-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3328.8	3328.8	3328.8	3328.8	3328.8
2.5°	3306.6	3313.3	3328.8	3335.5	3335.5
5°	3293.3	3300.0	3315.5	3322.2	3324.4
7.5°	3266.7	3275.6	3293.3	3302.2	3302.2
10°	3231.2	3242.3	3262.2	3275.6	3280.0
12.5°	3182.4	3195.7	3222.3	3237.8	3242.3
15°	3129.1	3140.2	3171.3	3193.5	3197.9
17.5°	3060.3	3078.1	3111.3	3140.2	3146.8
20°	2987.1	3007.0	3049.2	3082.5	3089.1
22.5°	2911.6	2927.1	2973.7	3013.7	3022.6
25°	2822.8	2838.4	2896.1	2938.2	2949.3
27.5°	2725.2	2751.8	2809.5	2858.4	2876.1
30°	2627.6	2654.2	2714.1	2771.8	2791.8
32.5°	2521.0	2549.9	2618.7	2678.6	2698.6
35°	2407.8	2441.1	2514.4	2583.2	2607.6
37.5°	2290.2	2328.0	2410.1	2483.3	2509.9
40°	2181.5	2208.1	2294.7	2379.0	2416.7
42.5°	2059.4	2094.9	2181.5	2276.9	2312.4
45°	1939.6	1972.9	2072.7	2172.6	2212.6
47.5°	1815.3	1857.5	1957.3	2068.3	2108.3
50°	1699.9	1735.4	1841.9	1959.6	2004.0
52.5°	1575.6	1613.4	1728.8	1850.8	1890.8
55°	1444.7	1491.3	1611.2	1735.4	1779.8
57.5°	1324.9	1369.3	1495.8	1624.5	1671.1
60°	1202.8	1247.2	1375.9	1506.8	1557.9
62.5°	1074.1	1125.1	1265.0	1391.4	1449.1
65°	954.3	1005.3	1149.6	1278.3	1336.0
67.5°	827.8	887.7	1031.9	1167.3	1225.0
70°	705.7	776.7	918.8	1051.9	1116.3
72.5°	597.0	654.7	803.4	943.2	996.4
75°	479.4	545.9	690.2	807.8	845.5
77.5°	379.5	437.2	574.8	652.4	676.9
80°	270.7	335.1	437.2	483.8	503.8
82.5°	179.8	233.0	297.4	306.3	301.8
85°	102.1	130.9	148.7	146.5	137.6
87.5°	39.9	44.4	33.3	20.0	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)