

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: P474955

Luminaire Tested: **22CZ2-70VHE-S-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474955  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-70VHE-S-UNV-L840-CD1-U  
Description: 2'X2' 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: 7248.0 lumens  
Efficiency: N/A  
Efficacy: 147.0 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

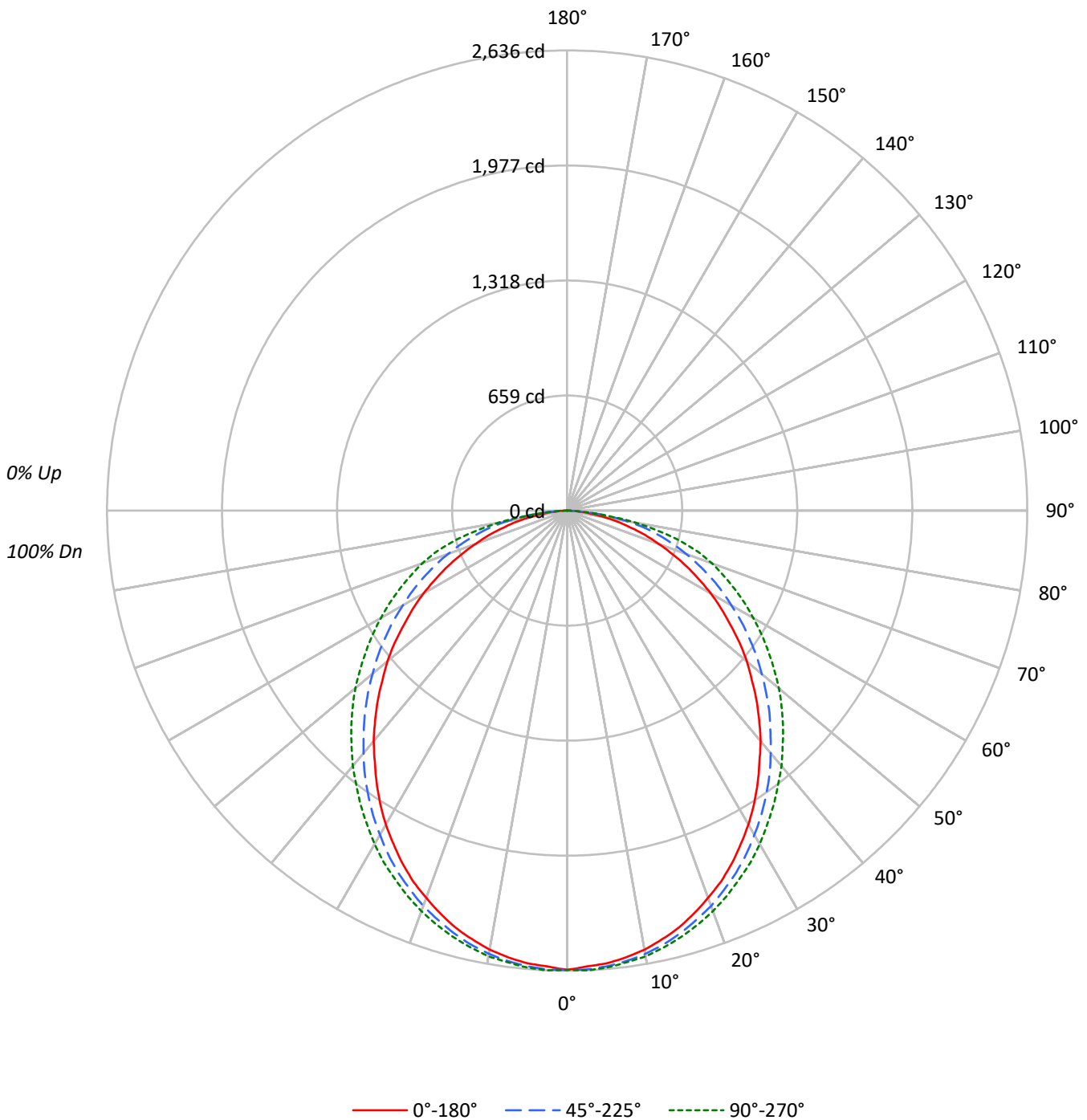
Input Watts (W): 49.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	7080	7080	7080
5°	7031	7079	7098
10°	6978	7045	7084
15°	6890	6983	7041
20°	6761	6901	6992
25°	6625	6796	6921
30°	6453	6666	6857
35°	6252	6528	6771
40°	6057	6371	6710
45°	5834	6235	6655
50°	5625	6095	6631
55°	5357	5974	6600
60°	5117	5853	6627
65°	4802	5785	6723
70°	4389	5714	6942
75°	3939	5672	6948
80°	3316	5354	6171
85°	2492	3628	3356



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	248.5	3.4
10°-20°	705.7	9.7
20°-30°	1052.2	14.5
30°-40°	1241.6	17.1
40°-50°	1265.0	17.5
50°-60°	1140.8	15.7
60°-70°	895.9	12.4
70°-80°	560.1	7.7
80°-90°	138.1	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°	2006.5	27.7
0°-40°	3248.1	44.8
0°-60°	5653.9	78.0
0°-90°	7248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7248.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2631	2631	2631	2631	2631	
5°	2603	2608	2620	2626	2628	247
15°	2473	2482	2506	2524	2528	696
25°	2231	2243	2289	2322	2331	1027
35°	1903	1929	1987	2042	2061	1190
45°	1533	1559	1638	1717	1749	1183
55°	1142	1179	1273	1372	1407	1024
65°	754	795	909	1010	1056	745
75°	379	432	546	638	668	405
85°	81	104	118	116	109	98
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2631.0	2631.0	2631.0	2631.0	2631.0
2.5°	2613.5	2618.7	2631.0	2636.3	2636.3
5°	2603.0	2608.2	2620.5	2625.8	2627.5
7.5°	2581.9	2588.9	2603.0	2610.0	2610.0
10°	2553.8	2562.6	2578.4	2588.9	2592.4
12.5°	2515.3	2525.8	2546.8	2559.1	2562.6
15°	2473.2	2481.9	2506.5	2524.0	2527.5
17.5°	2418.8	2432.8	2459.1	2481.9	2487.2
20°	2360.9	2376.7	2410.0	2436.3	2441.6
22.5°	2301.3	2313.5	2350.4	2382.0	2389.0
25°	2231.1	2243.4	2289.0	2322.3	2331.1
27.5°	2153.9	2175.0	2220.6	2259.2	2273.2
30°	2076.8	2097.8	2145.2	2190.8	2206.6
32.5°	1992.6	2015.4	2069.7	2117.1	2132.9
35°	1903.1	1929.4	1987.3	2041.7	2061.0
37.5°	1810.1	1840.0	1904.9	1962.7	1983.8
40°	1724.2	1745.2	1813.7	1880.3	1910.1
42.5°	1627.7	1655.8	1724.2	1799.6	1827.7
45°	1533.0	1559.3	1638.3	1717.2	1748.8
47.5°	1434.8	1468.1	1547.0	1634.7	1666.3
50°	1343.6	1371.6	1455.8	1548.8	1583.9
52.5°	1245.4	1275.2	1366.4	1462.8	1494.4
55°	1141.9	1178.7	1273.4	1371.6	1406.7
57.5°	1047.1	1082.2	1182.2	1283.9	1320.8
60°	950.7	985.8	1087.5	1191.0	1231.3
62.5°	848.9	889.3	999.8	1099.8	1145.4
65°	754.2	794.6	908.6	1010.3	1055.9
67.5°	654.2	701.6	815.6	922.6	968.2
70°	557.8	613.9	726.2	831.4	882.3
72.5°	471.8	517.4	635.0	745.5	787.6
75°	378.9	431.5	545.5	638.5	668.3
77.5°	299.9	345.5	454.3	515.7	535.0
80°	214.0	264.9	345.5	382.4	398.2
82.5°	142.1	184.2	235.0	242.1	238.5
85°	80.7	103.5	117.5	115.8	108.7
87.5°	31.6	35.1	26.3	15.8	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)