

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: P475248

Luminaire Tested: **22CZ2-85VHE-SQR-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475248  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-85VHE-SQR-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7854.1 lumens  
Efficiency: N/A  
Efficacy: 124.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

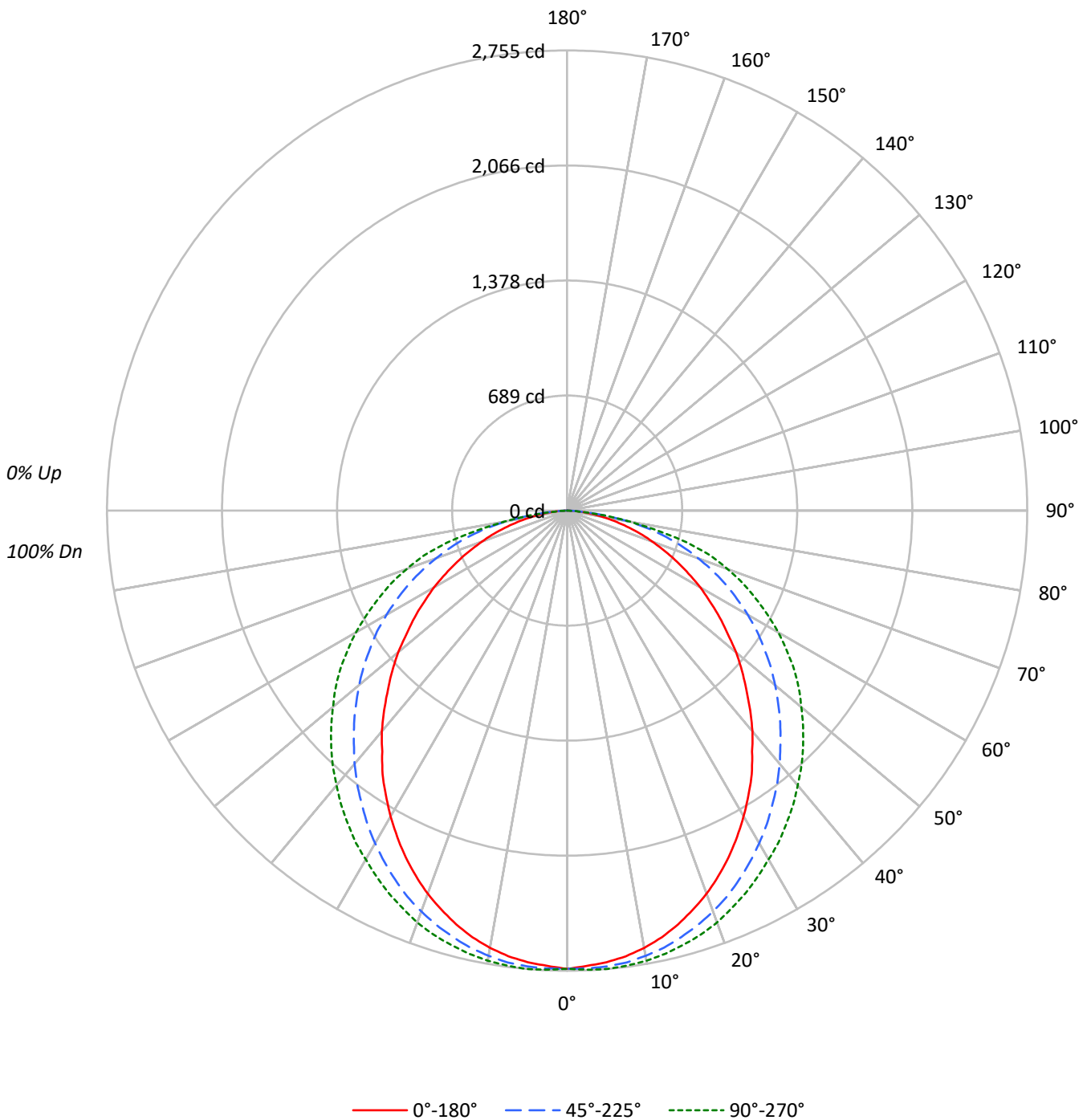
Input Watts (W): 63.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7383	7383	7383
5°	7331	7401	7442
10°	7263	7395	7476
15°	7146	7363	7498
20°	6992	7313	7515
25°	6796	7238	7504
30°	6568	7147	7494
35°	6331	7041	7519
40°	6063	6954	7543
45°	5774	6866	7604
50°	5524	6804	7662
55°	5229	6750	7783
60°	4955	6722	7865
65°	4628	6669	7927
70°	4252	6569	8035
75°	3839	6394	7750
80°	3292	5664	5836
85°	2649	3338	2649



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	260.1	3.3
10°-20°	743.7	9.5
20°-30°	1116.9	14.2
30°-40°	1332.1	17.0
40°-50°	1377.3	17.5
50°-60°	1266.2	16.1
60°-70°	1008.0	12.8
70°-80°	615.9	7.8
80°-90°	133.8	1.7
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°	2120.7	27.0
0°-40°	3452.8	44.0
0°-60°	6096.3	77.6
0°-90°	7854.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7854.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2744	2744	2744	2744	2744	
5°	2714	2721	2740	2751	2755	257
15°	2565	2595	2643	2680	2692	722
25°	2289	2345	2438	2505	2527	1053
35°	1927	2009	2143	2256	2289	1202
45°	1517	1625	1804	1950	1998	1173
55°	1114	1238	1439	1603	1659	997
65°	727	850	1047	1193	1245	720
75°	369	477	615	723	745	393
85°	86	104	108	93	86	99
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2743.5	2743.5	2743.5	2743.5	2743.5
2.5°	2728.6	2732.3	2743.5	2751.3	2751.3
5°	2713.8	2721.2	2739.8	2751.3	2755.0
7.5°	2691.5	2702.6	2728.6	2743.5	2747.6
10°	2658.1	2672.9	2706.3	2728.6	2736.0
12.5°	2616.8	2639.1	2680.4	2710.1	2717.5
15°	2564.9	2594.6	2642.8	2680.4	2691.5
17.5°	2505.0	2542.2	2602.0	2646.9	2661.8
20°	2441.5	2479.1	2553.7	2605.7	2624.3
22.5°	2367.3	2415.5	2501.3	2561.1	2576.0
25°	2288.9	2344.6	2437.8	2505.0	2527.3
27.5°	2203.1	2270.3	2371.0	2453.1	2471.6
30°	2113.6	2184.5	2300.0	2389.6	2411.8
32.5°	2020.4	2102.5	2225.4	2326.0	2356.1
35°	1927.2	2009.2	2143.3	2255.5	2288.9
37.5°	1819.1	1916.0	2065.3	2180.8	2221.7
40°	1725.9	1819.1	1979.5	2106.2	2147.4
42.5°	1621.5	1722.1	1890.0	2027.8	2076.5
45°	1517.1	1625.2	1804.2	1949.8	1998.1
47.5°	1420.2	1528.3	1714.7	1867.8	1916.0
50°	1319.6	1431.3	1625.2	1782.0	1830.2
52.5°	1211.5	1334.4	1535.7	1692.4	1748.5
55°	1114.5	1237.5	1438.8	1602.9	1659.0
57.5°	1013.9	1140.5	1349.7	1506.0	1558.4
60°	920.7	1043.6	1249.0	1401.6	1461.4
62.5°	820.0	946.7	1148.0	1297.3	1353.4
65°	726.8	850.1	1047.3	1192.9	1244.9
67.5°	633.6	756.9	943.0	1081.1	1140.5
70°	540.4	663.7	834.9	969.3	1021.3
72.5°	458.7	566.8	730.5	853.9	902.1
75°	369.2	477.3	615.0	723.1	745.4
77.5°	287.1	384.0	499.5	547.8	555.6
80°	212.4	287.1	365.5	376.6	376.6
82.5°	141.5	197.6	227.3	231.0	227.3
85°	85.8	104.4	108.1	93.2	85.8
87.5°	29.7	29.7	18.6	11.1	3.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)