

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: P475296

Luminaire Tested: **22CZ2-29VHE-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475296  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29VHE-SQR-UNV-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2830.7 lumens  
Efficiency: N/A  
Efficacy: 142.2 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

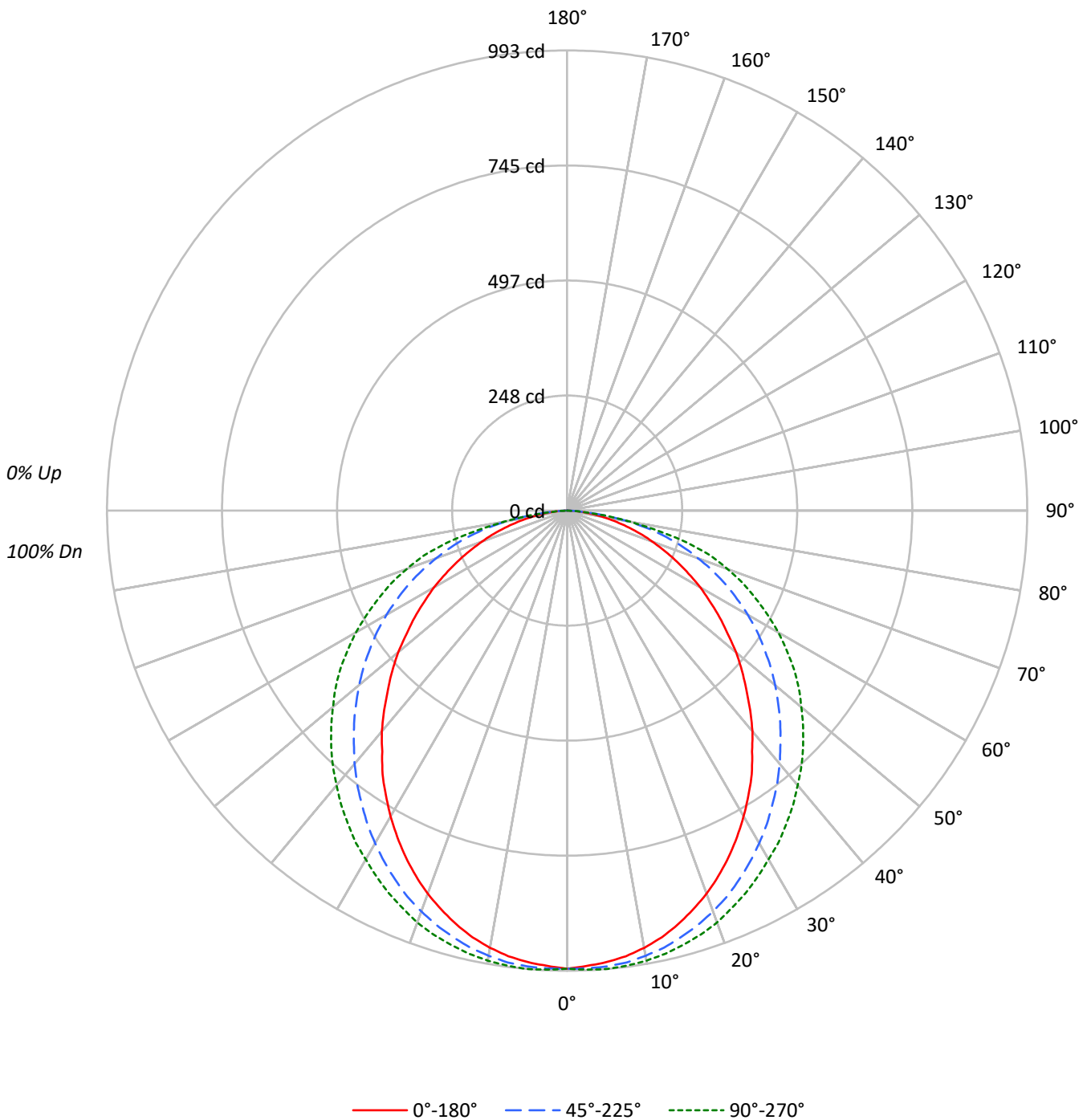
Input Watts (W): 19.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2661	2661	2661
5°	2642	2667	2682
10°	2618	2665	2695
15°	2575	2654	2702
20°	2520	2636	2708
25°	2449	2609	2705
30°	2367	2576	2701
35°	2282	2538	2710
40°	2185	2506	2719
45°	2081	2475	2740
50°	1991	2452	2761
55°	1885	2433	2805
60°	1786	2423	2835
65°	1668	2404	2857
70°	1533	2367	2896
75°	1384	2305	2793
80°	1187	2041	2103
85°	954	1204	954



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.7	3.3
10°-20°	268.0	9.5
20°-30°	402.6	14.2
30°-40°	480.1	17.0
40°-50°	496.4	17.5
50°-60°	456.4	16.1
60°-70°	363.3	12.8
70°-80°	222.0	7.8
80°-90°	48.2	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°	764.3	27.0
0°-40°	1244.4	44.0
0°-60°	2197.2	77.6
0°-90°	2830.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2830.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	989	989	989	989	989	
5°	978	981	987	992	993	93
15°	924	935	952	966	970	260
25°	825	845	879	903	911	379
35°	695	724	772	813	825	433
45°	547	586	650	703	720	423
55°	402	446	518	578	598	359
65°	262	306	378	430	449	259
75°	133	172	222	261	269	142
85°	31	38	39	34	31	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	988.8	988.8	988.8	988.8	988.8
2.5°	983.4	984.8	988.8	991.6	991.6
5°	978.1	980.7	987.4	991.6	992.9
7.5°	970.0	974.1	983.4	988.8	990.3
10°	958.0	963.3	975.4	983.4	986.1
12.5°	943.1	951.2	966.0	976.7	979.4
15°	924.4	935.1	952.5	966.0	970.0
17.5°	902.8	916.2	937.8	954.0	959.3
20°	879.9	893.5	920.4	939.1	945.8
22.5°	853.2	870.6	901.5	923.1	928.4
25°	824.9	845.0	878.6	902.8	910.9
27.5°	794.0	818.3	854.5	884.1	890.8
30°	761.8	787.3	829.0	861.2	869.2
32.5°	728.2	757.7	802.0	838.3	849.2
35°	694.6	724.1	772.5	812.9	824.9
37.5°	655.6	690.5	744.4	786.0	800.7
40°	622.0	655.6	713.4	759.1	773.9
42.5°	584.4	620.7	681.2	730.8	748.4
45°	546.8	585.7	650.3	702.7	720.1
47.5°	511.9	550.8	618.0	673.2	690.5
50°	475.6	515.9	585.7	642.2	659.6
52.5°	436.6	480.9	553.5	610.0	630.2
55°	401.7	446.0	518.5	577.7	597.9
57.5°	365.4	411.1	486.4	542.8	561.7
60°	331.8	376.1	450.2	505.2	526.7
62.5°	295.5	341.2	413.7	467.6	487.8
65°	261.9	306.4	377.5	429.9	448.7
67.5°	228.3	272.8	339.8	389.7	411.1
70°	194.8	239.2	300.9	349.4	368.1
72.5°	165.3	204.3	263.3	307.7	325.1
75°	133.1	172.0	221.7	260.6	268.6
77.5°	103.5	138.4	180.0	197.4	200.3
80°	76.6	103.5	131.7	135.7	135.7
82.5°	51.0	71.2	81.9	83.3	81.9
85°	30.9	37.6	39.0	33.6	30.9
87.5°	10.7	10.7	6.7	4.0	1.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)