

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: P277402

Luminaire Tested: **22CZ2-29HE-S-UNV-L82765-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277402  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29HE-S-UNV-L82765-W2A1-U-4500K  
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2846.0 lumens  
Efficiency: N/A  
Efficacy: 134.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

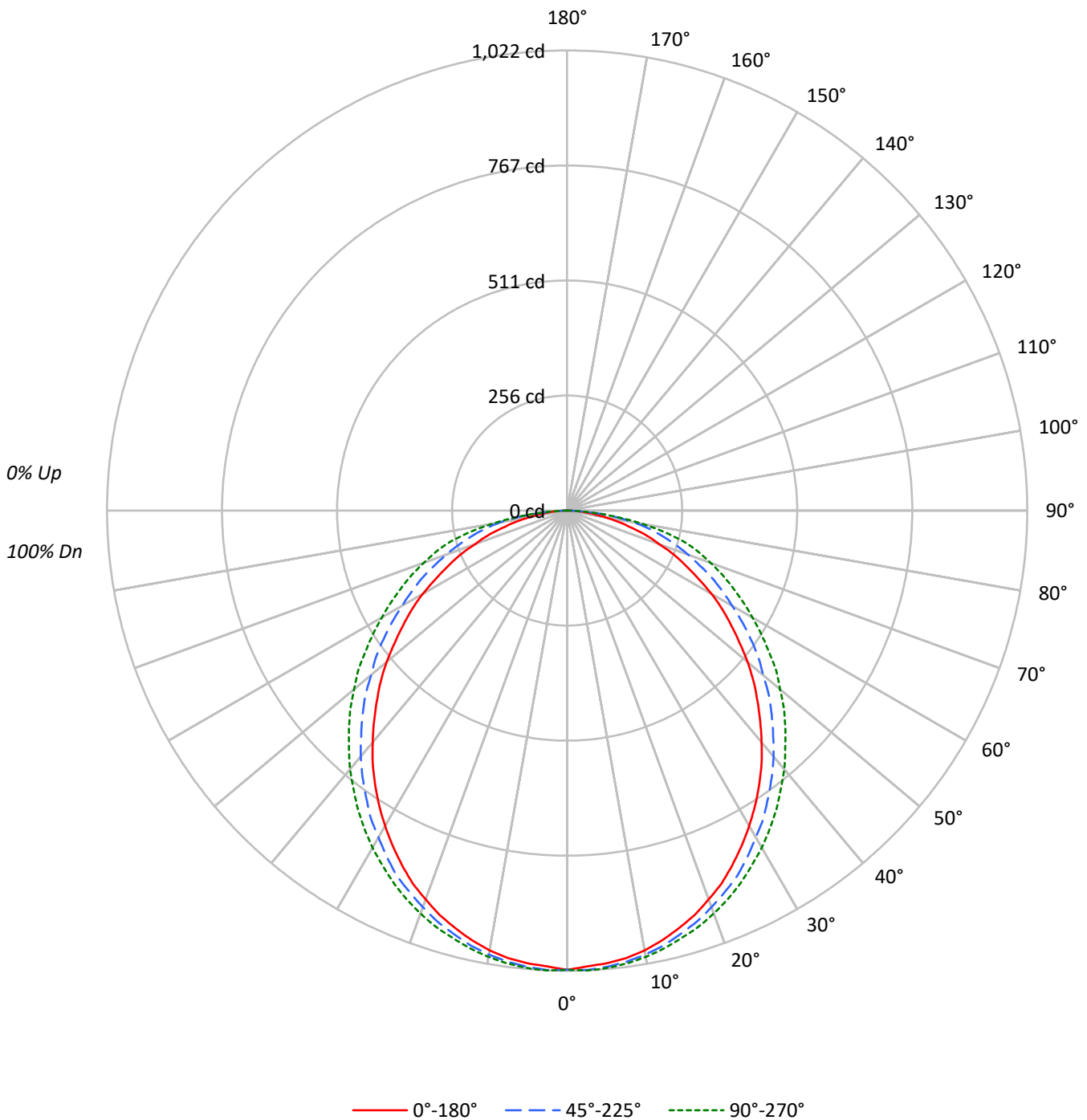
Input Watts (W): 21.204  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2744	2744	2744
5°	2726	2748	2755
10°	2710	2736	2750
15°	2675	2712	2737
20°	2631	2685	2727
25°	2578	2657	2709
30°	2513	2604	2686
35°	2443	2556	2661
40°	2360	2505	2636
45°	2274	2446	2608
50°	2190	2379	2585
55°	2087	2336	2567
60°	1994	2280	2559
65°	1860	2266	2587
70°	1714	2246	2664
75°	1546	2278	2803
80°	1337	2346	2634
85°	1108	1967	1967



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.4	3.4
10°-20°	274.5	9.6
20°-30°	410.7	14.4
30°-40°	486.3	17.1
40°-50°	495.6	17.4
50°-60°	444.2	15.6
60°-70°	347.8	12.2
70°-80°	224.3	7.9
80°-90°	66.2	2.3
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°	781.5	27.5
0°-40°	1267.9	44.5
0°-60°	2207.7	77.6
0°-90°	2846.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2846.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1020	1020	1020	1020	1020	
5°	1009	1012	1017	1018	1020	96
15°	960	965	973	981	983	271
25°	868	876	895	907	912	400
35°	744	753	778	802	810	465
45°	598	611	643	676	685	461
55°	445	459	498	532	547	399
65°	292	309	356	390	406	290
75°	149	171	219	256	270	159
85°	36	49	64	64	64	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1019.8	1019.8	1019.8	1019.8	1019.8
2.5°	1013.2	1015.8	1021.1	1022.5	1022.5
5°	1009.2	1011.8	1017.2	1018.5	1019.8
7.5°	1002.5	1003.9	1010.5	1013.2	1014.5
10°	991.9	994.6	1001.2	1005.2	1006.5
12.5°	977.3	981.3	989.3	994.6	995.9
15°	960.1	965.4	973.3	981.3	982.6
17.5°	941.5	946.8	957.4	966.7	969.4
20°	918.9	925.5	937.5	948.1	952.1
22.5°	896.3	901.6	916.2	929.5	933.5
25°	868.4	876.4	895.0	906.9	912.3
27.5°	839.2	848.5	867.1	883.0	888.4
30°	808.7	818.0	837.9	857.8	864.4
32.5°	776.8	787.4	811.3	831.3	837.9
35°	743.6	752.9	778.1	802.0	810.0
37.5°	709.1	717.1	746.3	771.5	779.5
40°	671.9	682.5	713.1	742.3	750.3
42.5°	634.7	646.7	677.2	709.1	717.1
45°	597.5	610.8	642.7	675.9	685.2
47.5°	561.7	572.3	608.2	640.0	653.3
50°	523.2	533.8	568.3	604.2	617.5
52.5°	483.3	498.0	535.1	569.7	585.6
55°	444.8	459.4	498.0	532.5	547.1
57.5°	409.0	420.9	460.8	496.6	511.2
60°	370.5	381.1	423.6	462.1	475.4
62.5°	329.3	345.2	389.1	424.9	440.9
65°	292.1	309.4	355.9	390.4	406.3
67.5°	257.6	273.5	318.7	355.9	373.1
70°	217.8	239.0	285.5	322.7	338.6
72.5°	185.9	204.5	252.3	289.5	306.7
75°	148.7	171.3	219.1	256.3	269.6
77.5°	118.2	140.8	185.9	215.1	221.8
80°	86.3	108.9	151.4	166.0	170.0
82.5°	58.4	79.7	108.9	112.9	114.2
85°	35.9	49.1	63.7	63.7	63.7
87.5°	17.3	19.9	22.6	21.2	21.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)