

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: P277399

Luminaire Tested: **22CZ2-29HE-S-UNV-L82765-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277399  
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-3000K  
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2645.0 lumens  
Efficiency: N/A  
Efficacy: 128.1 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

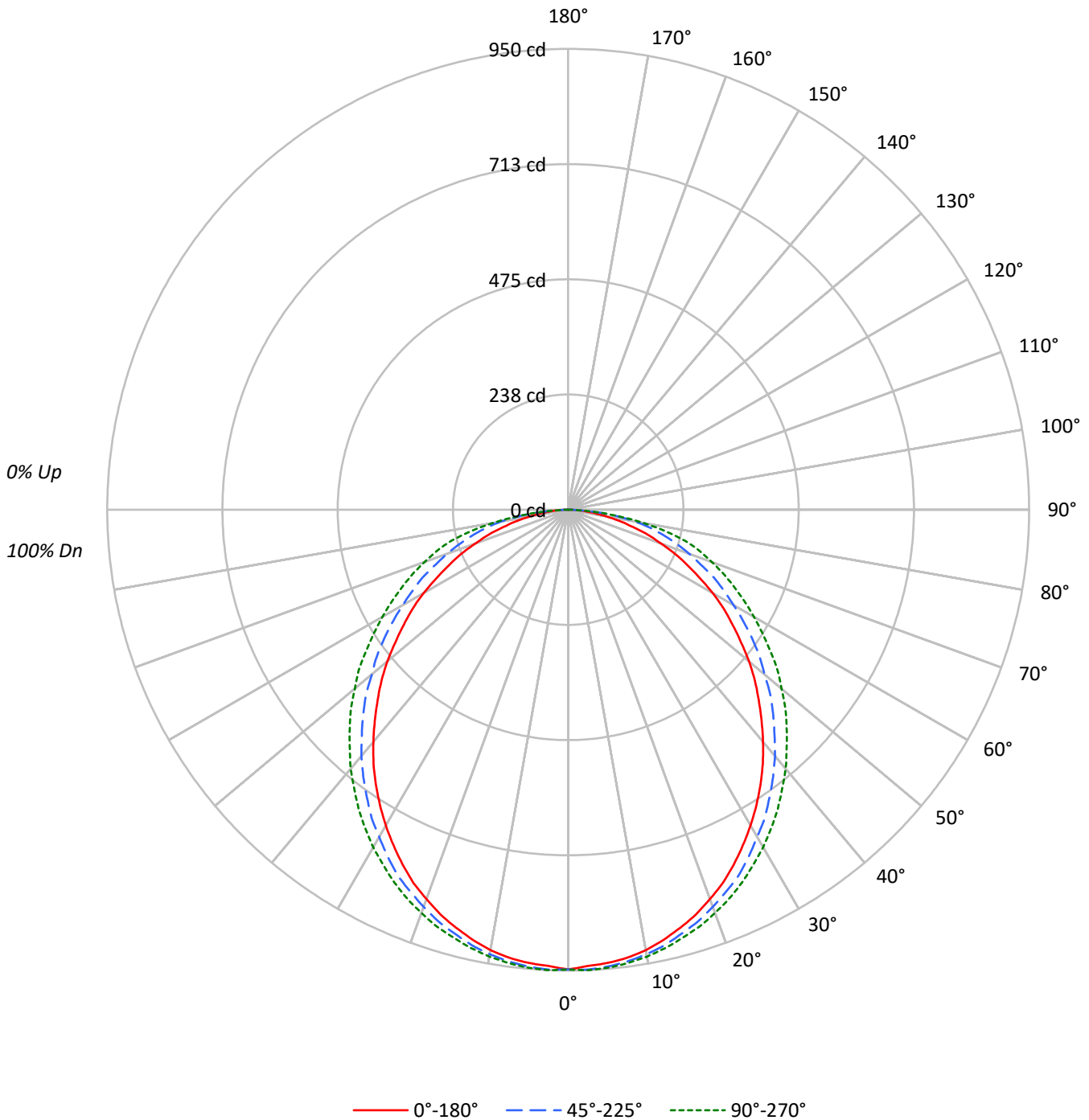
Input Watts (W): 20.646  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2551	2551	2551
5°	2534	2553	2560
10°	2519	2543	2556
15°	2486	2520	2544
20°	2446	2495	2534
25°	2396	2470	2517
30°	2335	2420	2496
35°	2270	2376	2473
40°	2194	2328	2449
45°	2113	2273	2423
50°	2035	2211	2403
55°	1939	2171	2385
60°	1853	2119	2378
65°	1729	2106	2404
70°	1592	2087	2476
75°	1437	2117	2604
80°	1243	2180	2448
85°	1028	1828	1828



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.6	3.4
10°-20°	255.1	9.6
20°-30°	381.7	14.4
30°-40°	452.0	17.1
40°-50°	460.6	17.4
50°-60°	412.8	15.6
60°-70°	323.2	12.2
70°-80°	208.4	7.9
80°-90°	61.6	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°	726.4	27.5
0°-40°	1178.3	44.5
0°-60°	2051.8	77.6
0°-90°	2645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2645.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	948	948	948	948	948	
5°	938	940	945	947	948	89
15°	892	897	905	912	913	252
25°	807	814	832	843	848	372
35°	691	700	723	745	753	432
45°	555	568	597	628	637	429
55°	413	427	463	495	508	371
65°	272	288	331	363	378	270
75°	138	159	204	238	250	148
85°	33	46	59	59	59	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	947.8	947.8	947.8	947.8	947.8
2.5°	941.6	944.1	949.0	950.3	950.3
5°	937.9	940.4	945.3	946.6	947.8
7.5°	931.7	933.0	939.1	941.6	942.8
10°	921.9	924.3	930.5	934.2	935.4
12.5°	908.3	912.0	919.4	924.3	925.6
15°	892.3	897.2	904.6	912.0	913.2
17.5°	875.0	879.9	889.8	898.4	900.9
20°	854.0	860.2	871.3	881.1	884.8
22.5°	833.0	838.0	851.5	863.9	867.6
25°	807.1	814.5	831.8	842.9	847.8
27.5°	779.9	788.6	805.9	820.7	825.6
30°	751.6	760.2	778.7	797.2	803.4
32.5°	721.9	731.8	754.0	772.5	778.7
35°	691.1	699.7	723.2	745.4	752.8
37.5°	659.0	666.4	693.6	717.0	724.4
40°	624.5	634.3	662.7	689.9	697.3
42.5°	589.9	601.0	629.4	659.0	666.4
45°	555.3	567.7	597.3	628.2	636.8
47.5°	522.0	531.9	565.2	594.8	607.2
50°	486.2	496.1	528.2	561.5	573.9
52.5°	449.2	462.8	497.3	529.4	544.2
55°	413.4	427.0	462.8	494.9	508.4
57.5°	380.1	391.2	428.2	461.6	475.1
60°	344.3	354.2	393.7	429.5	441.8
62.5°	306.1	320.9	361.6	394.9	409.7
65°	271.5	287.5	330.7	362.8	377.6
67.5°	239.4	254.2	296.2	330.7	346.8
70°	202.4	222.1	265.3	299.9	314.7
72.5°	172.8	190.1	234.5	269.0	285.1
75°	138.2	159.2	203.6	238.2	250.5
77.5°	109.8	130.8	172.8	199.9	206.1
80°	80.2	101.2	140.7	154.3	158.0
82.5°	54.3	74.0	101.2	104.9	106.1
85°	33.3	45.7	59.2	59.2	59.2
87.5°	16.0	18.5	21.0	19.7	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)