

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: P277164

Luminaire Tested: **22CZ2-29HE-UNV-L83050-W2A1-U-4000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277164  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29HE-UNV-L83050-W2A1-U-4000K  
Description: CRUZE 2.0 2x2 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (168) 80 CRI LEDS TUNED TO 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2789.0 lumens  
Efficiency: N/A  
Efficacy: 131.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

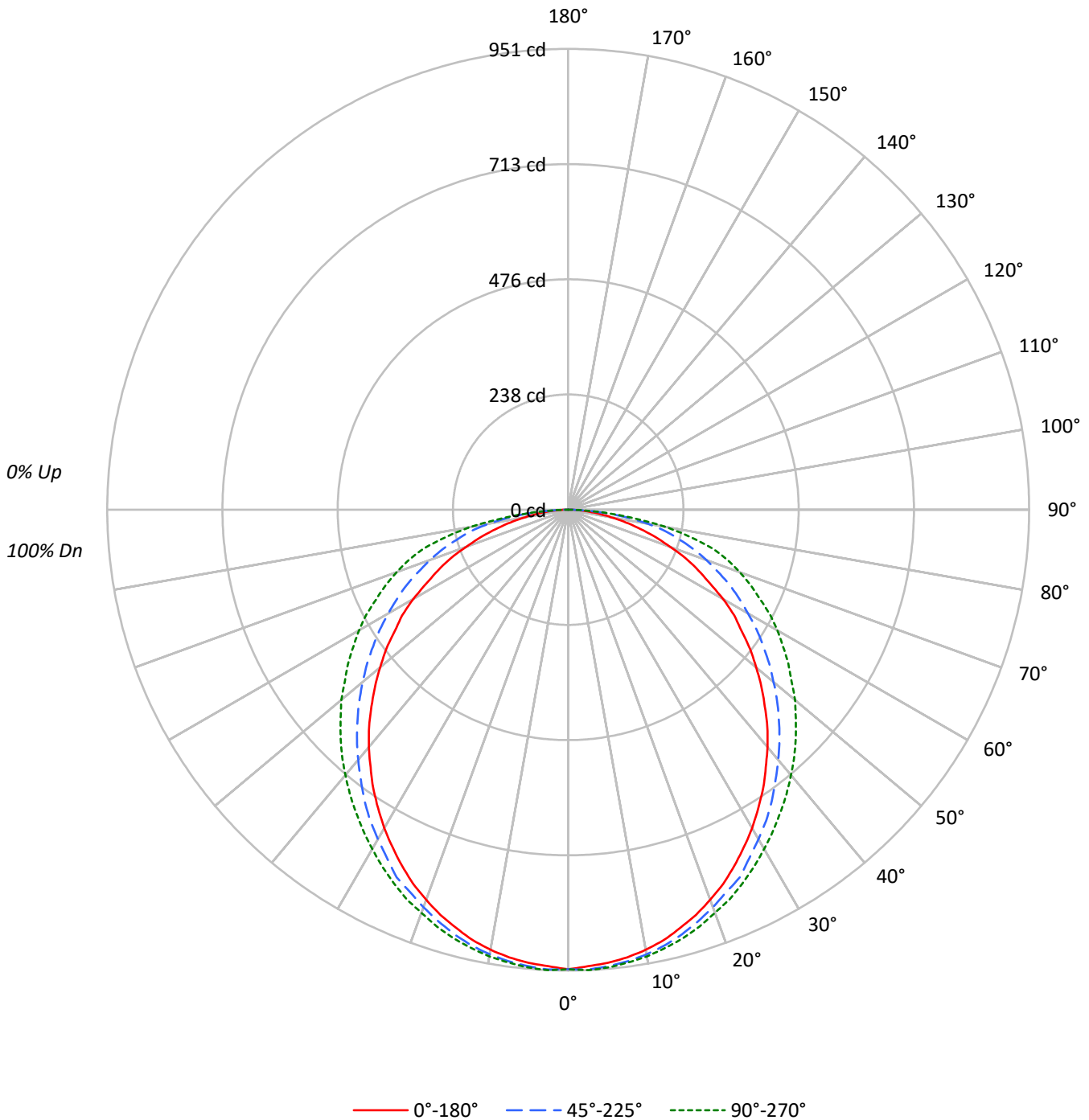
Input Watts (W): 21.297  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	2552	2552	2552
5°	2536	2554	2562
10°	2520	2546	2558
15°	2489	2527	2550
20°	2452	2499	2535
25°	2408	2485	2526
30°	2358	2439	2512
35°	2304	2407	2507
40°	2246	2367	2512
45°	2183	2340	2528
50°	2120	2316	2557
55°	2047	2305	2601
60°	1987	2305	2681
65°	1887	2342	2779
70°	1760	2386	2958
75°	1613	2468	3196
80°	1404	2574	3147
85°	1229	2288	2501



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.7	3.2
10°-20°	255.4	9.2
20°-30°	383.5	13.7
30°-40°	458.2	16.4
40°-50°	476.5	17.1
50°-60°	441.6	15.8
60°-70°	362.2	13.0
70°-80°	244.9	8.8
80°-90°	76.9	2.8
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°	728.6	26.1
0°-40°	1186.8	42.6
0°-60°	2104.9	75.5
0°-90°	2789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2789.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	948	948	948	948	948	
5°	939	940	946	947	948	89
15°	893	898	907	913	915	252
25°	811	818	837	847	851	374
35°	701	711	733	755	763	438
45°	574	585	615	650	664	443
55°	436	450	491	535	554	392
65°	296	313	368	416	436	293
75°	155	181	237	286	307	164
85°	40	55	74	82	81	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	948.3	948.3	948.3	948.3	948.3
2.5°	942.8	945.6	949.7	951.1	951.1
5°	938.7	940.1	945.6	946.9	948.3
7.5°	931.8	934.6	940.1	941.4	942.8
10°	922.2	925.0	931.8	934.6	936.0
12.5°	909.9	912.6	920.9	925.0	926.4
15°	893.4	897.5	907.1	912.6	915.4
17.5°	876.9	881.1	890.7	898.9	901.7
20°	856.4	866.0	872.8	883.8	885.2
22.5°	835.8	841.3	853.6	864.6	870.1
25°	811.1	817.9	837.1	846.8	850.9
27.5°	785.0	794.6	809.7	824.8	830.3
30°	758.9	765.8	785.0	802.8	808.3
32.5°	730.1	739.7	760.3	778.1	786.4
35°	701.3	710.9	732.8	754.8	763.0
37.5°	669.7	680.7	702.7	728.7	739.7
40°	639.5	647.8	673.8	705.4	715.0
42.5°	608.0	617.6	645.0	679.3	690.3
45°	573.7	584.6	614.8	650.5	664.2
47.5°	540.7	551.7	584.6	620.3	636.8
50°	506.4	520.1	553.1	594.2	610.7
52.5°	473.5	485.8	522.9	565.4	580.5
55°	436.4	450.1	491.3	535.2	554.4
57.5°	406.2	415.8	461.1	506.4	525.6
60°	369.2	381.5	428.2	476.2	498.2
62.5°	329.4	350.0	398.0	447.4	469.4
65°	296.4	312.9	367.8	415.8	436.4
67.5°	262.1	280.0	333.5	384.3	407.6
70°	223.7	247.0	303.3	354.1	376.0
72.5°	189.4	214.1	271.7	321.1	344.5
75°	155.1	181.2	237.4	285.5	307.4
77.5°	122.1	151.0	205.9	242.9	256.6
80°	90.6	118.0	166.1	192.1	203.1
82.5°	63.1	86.5	122.1	135.9	138.6
85°	39.8	54.9	74.1	82.3	81.0
87.5°	17.8	22.0	27.4	30.2	28.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)