

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: P277417

Luminaire Tested: **22CZ2-39HE-S-UNV-L82765-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P277417  
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: 22CZ2-39HE-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: 3654.0 lumens  
Efficiency: N/A  
Efficacy: 122.0 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

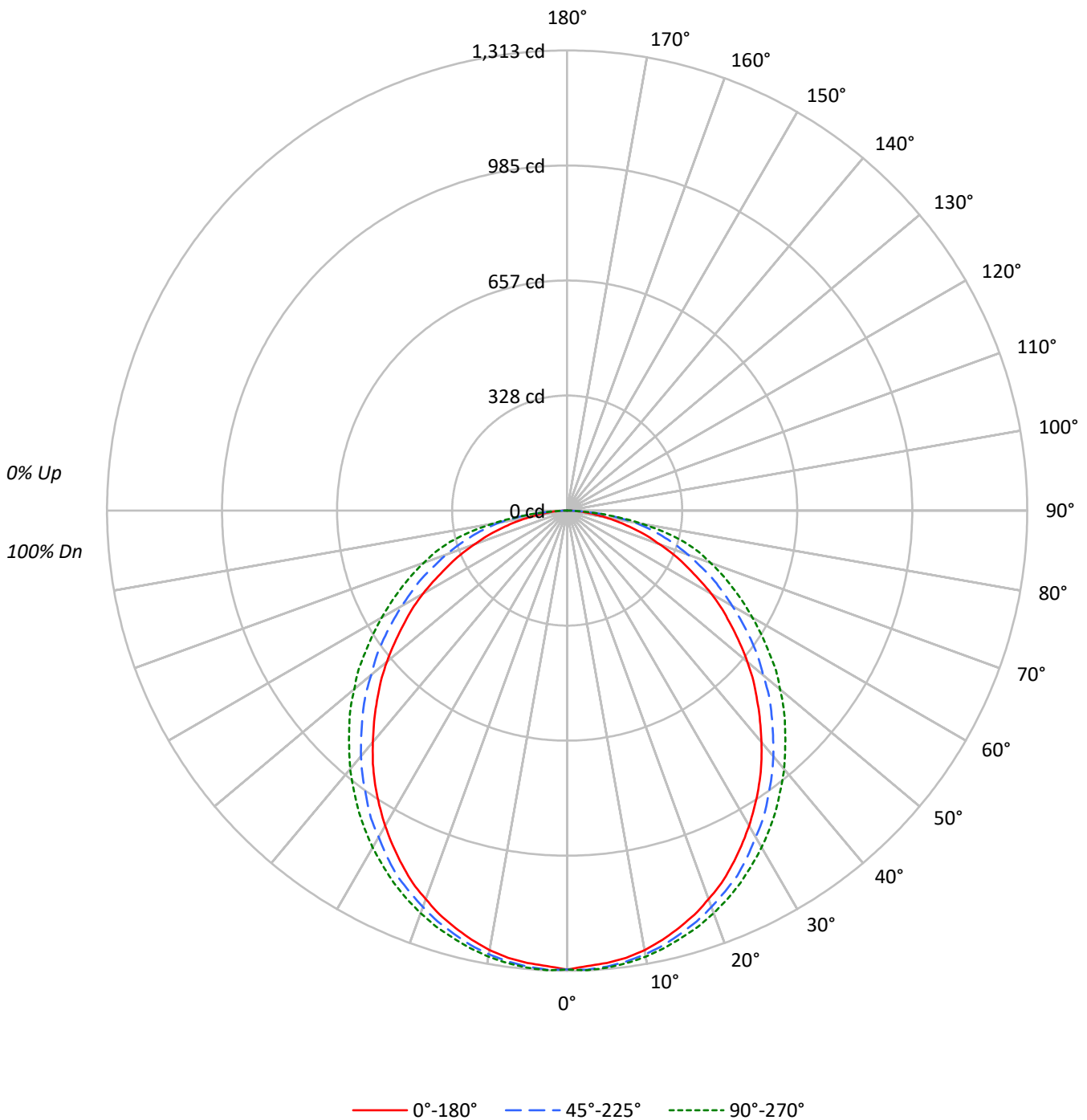
Input Watts (W): 29.946  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3523	3523	3523
5°	3500	3528	3537
10°	3480	3513	3531
15°	3434	3482	3515
20°	3379	3447	3501
25°	3311	3412	3477
30°	3226	3343	3449
35°	3136	3282	3416
40°	3031	3216	3384
45°	2920	3140	3348
50°	2812	3055	3319
55°	2679	2999	3295
60°	2560	2927	3285
65°	2388	2909	3322
70°	2200	2884	3420
75°	1985	2925	3598
80°	1717	3013	3381
85°	1420	2526	2526



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.8	3.4
10°-20°	352.4	9.6
20°-30°	527.2	14.4
30°-40°	624.4	17.1
40°-50°	636.3	17.4
50°-60°	570.3	15.6
60°-70°	446.5	12.2
70°-80°	287.9	7.9
80°-90°	85.1	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°	1003.4	27.5
0°-40°	1627.8	44.5
0°-60°	2834.5	77.6
0°-90°	3654.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3654.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1309	1309	1309	1309	1309	
5°	1296	1299	1306	1308	1309	123
15°	1233	1239	1250	1260	1262	348
25°	1115	1125	1149	1164	1171	513
35°	955	967	999	1030	1040	597
45°	767	784	825	868	880	592
55°	571	590	639	684	702	512
65°	375	397	457	501	522	373
75°	191	220	281	329	346	205
85°	46	63	82	82	82	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1309.3	1309.3	1309.3	1309.3	1309.3
2.5°	1300.8	1304.2	1311.0	1312.8	1312.8
5°	1295.7	1299.1	1305.9	1307.6	1309.3
7.5°	1287.2	1288.9	1297.4	1300.8	1302.5
10°	1273.5	1276.9	1285.5	1290.6	1292.3
12.5°	1254.8	1259.9	1270.1	1276.9	1278.7
15°	1232.6	1239.4	1249.7	1259.9	1261.6
17.5°	1208.8	1215.6	1229.2	1241.1	1244.6
20°	1179.8	1188.3	1203.6	1217.3	1222.4
22.5°	1150.8	1157.6	1176.4	1193.4	1198.5
25°	1115.0	1125.2	1149.1	1164.4	1171.2
27.5°	1077.5	1089.4	1113.3	1133.7	1140.6
30°	1038.3	1050.2	1075.8	1101.3	1109.9
32.5°	997.4	1011.0	1041.7	1067.3	1075.8
35°	954.7	966.7	999.1	1029.7	1040.0
37.5°	910.4	920.6	958.1	990.5	1000.8
40°	862.7	876.3	915.5	953.0	963.3
42.5°	814.9	830.3	869.5	910.4	920.6
45°	767.2	784.2	825.2	867.8	879.7
47.5°	721.2	734.8	780.8	821.7	838.8
50°	671.7	685.4	729.7	775.7	792.8
52.5°	620.6	639.3	687.1	731.4	751.8
55°	571.1	589.9	639.3	683.7	702.4
57.5°	525.1	540.4	591.6	637.6	656.4
60°	475.7	489.3	543.9	593.3	610.3
62.5°	422.8	443.3	499.5	545.6	566.0
65°	375.1	397.2	456.9	501.2	521.7
67.5°	330.7	351.2	409.2	456.9	479.1
70°	279.6	306.9	366.5	414.3	434.7
72.5°	238.7	262.6	323.9	371.7	393.8
75°	190.9	219.9	281.3	329.0	346.1
77.5°	151.7	180.7	238.7	276.2	284.7
80°	110.8	139.8	194.4	213.1	218.2
82.5°	75.0	102.3	139.8	144.9	146.6
85°	46.0	63.1	81.8	81.8	81.8
87.5°	22.2	25.6	29.0	27.3	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)