

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: P272038

Luminaire Tested: **22CZ2-39HE-S-UNV-L935-CD1-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P272038  
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-L935-CD1-U  
Description: 2'X2' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (196) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3504.0 lumens  
Efficiency: N/A  
Efficacy: 115.6 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

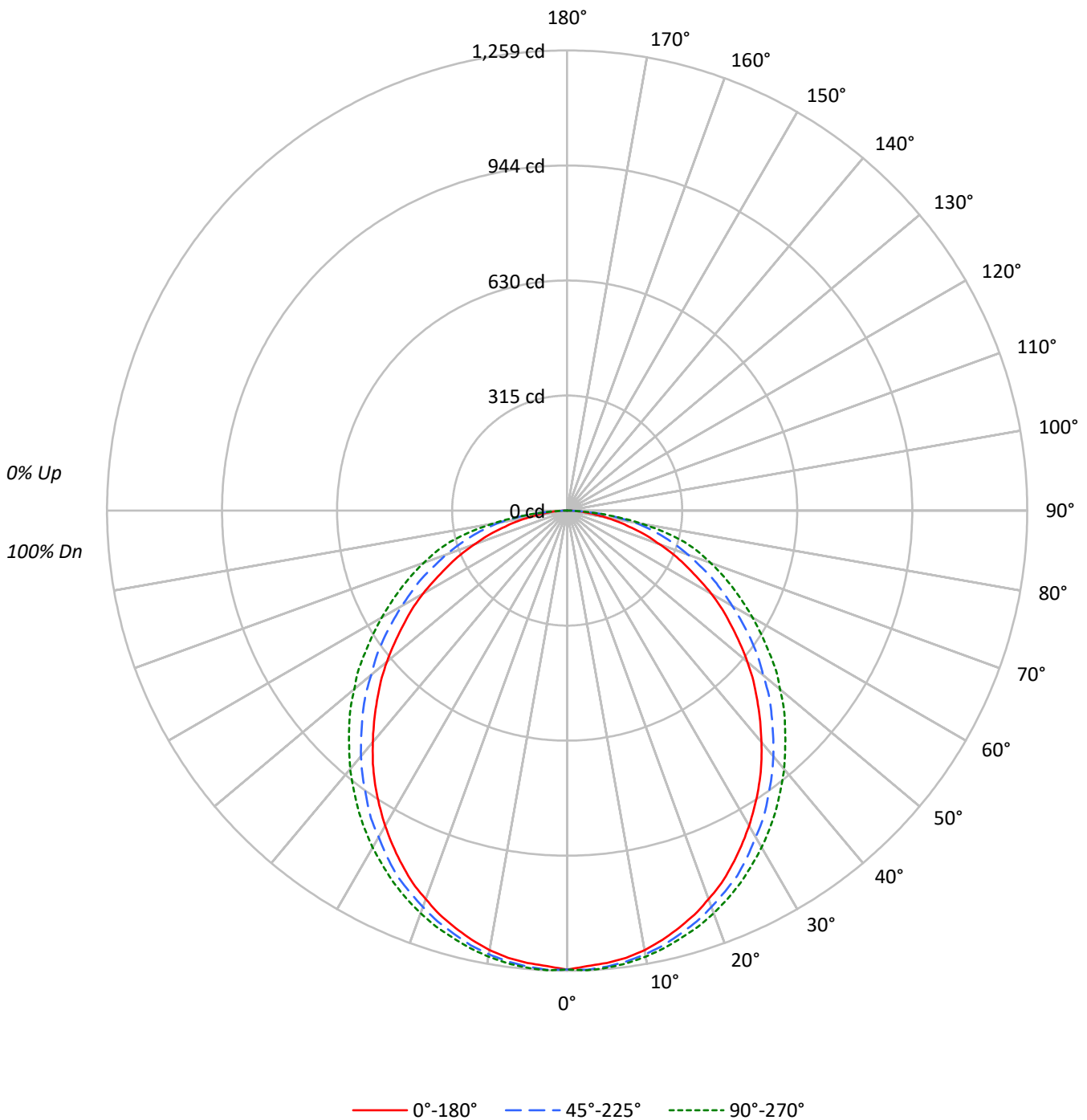
Input Watts (W): 30.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3379	3379	3379
5°	3356	3383	3392
10°	3337	3368	3386
15°	3293	3339	3370
20°	3240	3305	3357
25°	3175	3272	3335
30°	3094	3205	3307
35°	3007	3147	3276
40°	2906	3084	3245
45°	2800	3011	3210
50°	2696	2929	3183
55°	2570	2876	3160
60°	2455	2807	3150
65°	2290	2790	3186
70°	2109	2766	3280
75°	1904	2805	3451
80°	1647	2889	3243
85°	1362	2424	2424



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.7	3.4
10°-20°	337.9	9.6
20°-30°	505.6	14.4
30°-40°	598.8	17.1
40°-50°	610.2	17.4
50°-60°	546.9	15.6
60°-70°	428.2	12.2
70°-80°	276.1	7.9
80°-90°	81.6	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°	962.2	27.5
0°-40°	1561.0	44.5
0°-60°	2718.1	77.6
0°-90°	3504.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3504.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1242	1246	1252	1254	1256	118
15°	1182	1189	1198	1208	1210	333
25°	1069	1079	1102	1117	1123	492
35°	916	927	958	988	997	572
45°	736	752	791	832	844	568
55°	548	566	613	656	674	491
65°	360	381	438	481	500	357
75°	183	211	270	316	332	196
85°	44	60	78	78	78	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1255.6	1255.6	1255.6	1255.6	1255.6
2.5°	1247.4	1250.7	1257.2	1258.9	1258.9
5°	1242.5	1245.8	1252.3	1254.0	1255.6
7.5°	1234.3	1236.0	1244.1	1247.4	1249.1
10°	1221.3	1224.5	1232.7	1237.6	1239.2
12.5°	1203.3	1208.2	1218.0	1224.5	1226.2
15°	1182.0	1188.6	1198.4	1208.2	1209.8
17.5°	1159.1	1165.7	1178.8	1190.2	1193.5
20°	1131.3	1139.5	1154.2	1167.3	1172.2
22.5°	1103.5	1110.1	1128.1	1144.4	1149.3
25°	1069.2	1079.0	1101.9	1116.6	1123.2
27.5°	1033.2	1044.7	1067.6	1087.2	1093.7
30°	995.6	1007.1	1031.6	1056.1	1064.3
32.5°	956.4	969.5	998.9	1023.4	1031.6
35°	915.5	927.0	958.0	987.5	997.3
37.5°	873.0	882.8	918.8	949.9	959.7
40°	827.3	840.3	877.9	913.9	923.7
42.5°	781.5	796.2	833.8	873.0	882.8
45°	735.7	752.0	791.3	832.2	843.6
47.5°	691.6	704.6	748.8	788.0	804.4
50°	644.1	657.2	699.7	743.9	760.2
52.5°	595.1	613.1	658.9	701.4	721.0
55°	547.7	565.7	613.1	655.6	673.6
57.5°	503.5	518.3	567.3	611.4	629.4
60°	456.1	469.2	521.5	568.9	585.3
62.5°	405.5	425.1	479.0	523.2	542.8
65°	359.7	380.9	438.1	480.7	500.3
67.5°	317.2	336.8	392.4	438.1	459.4
70°	268.1	294.3	351.5	397.3	416.9
72.5°	228.9	251.8	310.6	356.4	377.7
75°	183.1	210.9	269.8	315.5	331.9
77.5°	145.5	173.3	228.9	264.9	273.0
80°	106.3	134.1	186.4	204.4	209.3
82.5°	71.9	98.1	134.1	139.0	140.6
85°	44.1	60.5	78.5	78.5	78.5
87.5°	21.3	24.5	27.8	26.2	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)