

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: P272039

Luminaire Tested: **22CZ2-39HE-S-UNV-L940-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: P272039  
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-L940-CD1-U  
Description: 2'X2' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (196) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

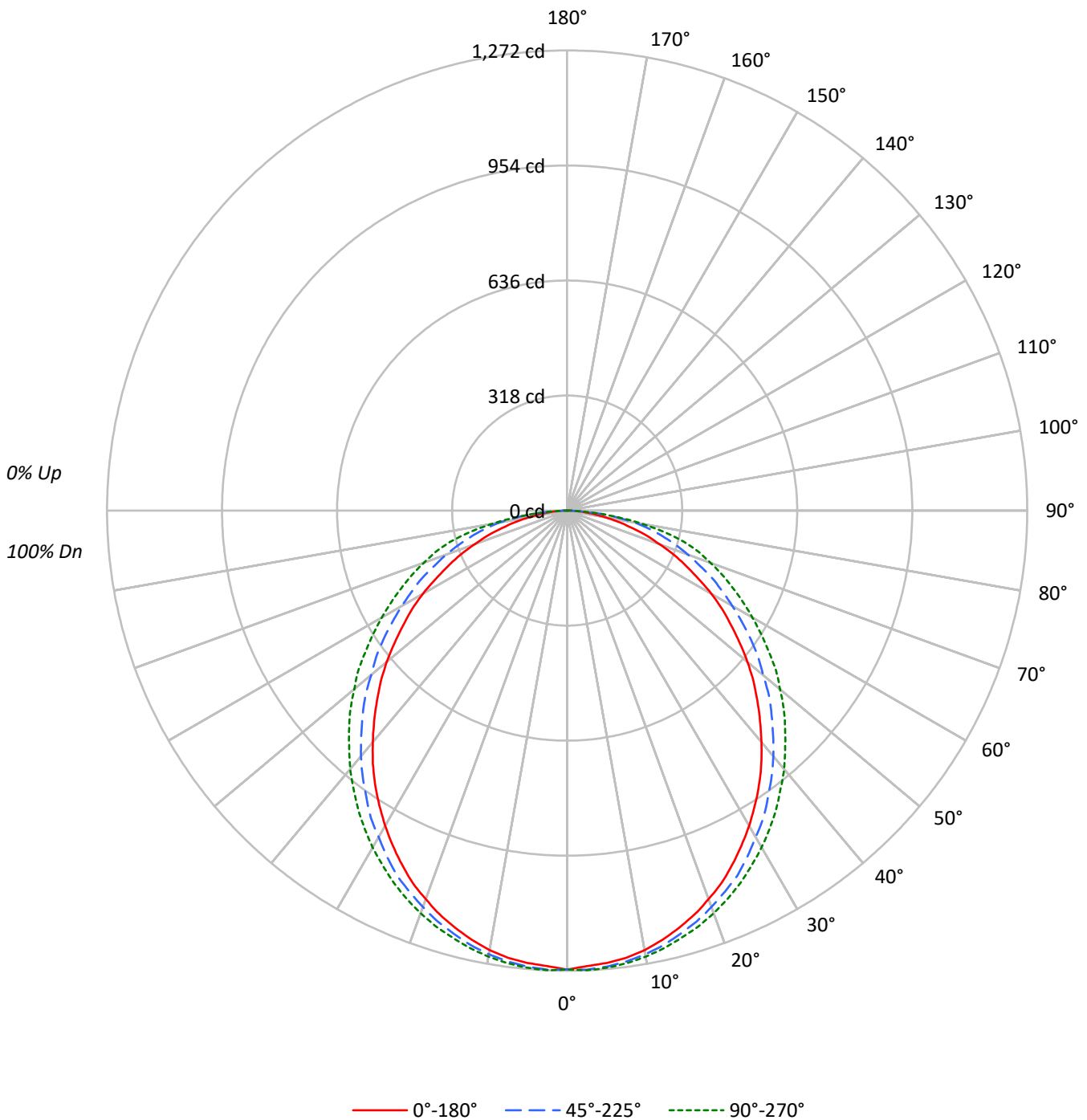
Lumens per Lamp: N/A  
Luminaire Lumens: 3540.0 lumens  
Efficiency: N/A  
Efficacy: 116.8 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P272039  
CATALOG NUMBER: 22CZ2-39HE-S-UNV-L940-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P272039

CATALOG NUMBER: 22CZ2-39HE-S-UNV-L940-CD1-U

**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°	3414	3414	3414
5°	3391	3418	3427
10°	3371	3403	3421
15°	3327	3373	3405
20°	3273	3339	3391
25°	3207	3305	3369
30°	3126	3238	3341
35°	3038	3180	3310
40°	2936	3116	3278
45°	2829	3042	3244
50°	2725	2959	3215
55°	2596	2906	3193
60°	2480	2836	3182
65°	2314	2819	3218
70°	2131	2794	3314
75°	1923	2833	3486
80°	1664	2918	3276
85°	1377	2448	2448



TEST NUMBER: P272039

CATALOG NUMBER: 22CZ2-39HE-S-UNV-L940-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.0	3.4
10°-20°	341.4	9.6
20°-30°	510.8	14.4
30°-40°	604.9	17.1
40°-50°	616.5	17.4
50°-60°	552.5	15.6
60°-70°	432.6	12.2
70°-80°	279.0	7.9
80°-90°	82.4	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°	972.1	27.5
0°-40°	1577.0	44.5
0°-60°	2746.1	77.6
0°-90°	3540.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3540.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1268	1268	1268	1268	1268	
5°	1255	1259	1265	1267	1268	119
15°	1194	1201	1211	1221	1222	337
25°	1080	1090	1113	1128	1135	497
35°	925	936	968	998	1008	578
45°	743	760	799	841	852	574
55°	553	572	619	662	680	496
65°	363	385	443	486	505	361
75°	185	213	272	319	335	198
85°	45	61	79	79	79	52
90°	0	0	0	0	0	



TEST NUMBER: P272039

CATALOG NUMBER: 22CZ2-39HE-S-UNV-L940-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1268.5	1268.5	1268.5	1268.5	1268.5
2.5°	1260.2	1263.5	1270.1	1271.8	1271.8
5°	1255.3	1258.6	1265.2	1266.8	1268.5
7.5°	1247.0	1248.7	1256.9	1260.2	1261.9
10°	1233.8	1237.1	1245.4	1250.3	1252.0
12.5°	1215.6	1220.6	1230.5	1237.1	1238.8
15°	1194.2	1200.8	1210.7	1220.6	1222.2
17.5°	1171.0	1177.6	1190.9	1202.4	1205.7
20°	1143.0	1151.2	1166.1	1179.3	1184.3
22.5°	1114.9	1121.5	1139.7	1156.2	1161.1
25°	1080.2	1090.1	1113.2	1128.1	1134.7
27.5°	1043.9	1055.4	1078.5	1098.4	1105.0
30°	1005.9	1017.4	1042.2	1067.0	1075.2
32.5°	966.2	979.4	1009.2	1034.0	1042.2
35°	924.9	936.5	967.9	997.6	1007.5
37.5°	882.0	891.9	928.2	959.6	969.5
40°	835.8	849.0	887.0	923.3	933.2
42.5°	789.5	804.4	842.4	882.0	891.9
45°	743.3	759.8	799.4	840.7	852.3
47.5°	698.7	711.9	756.5	796.1	812.6
50°	650.8	664.0	706.9	751.5	768.0
52.5°	601.2	619.4	665.6	708.6	728.4
55°	553.3	571.5	619.4	662.3	680.5
57.5°	508.7	523.6	573.1	617.7	635.9
60°	460.8	474.0	526.9	574.8	591.3
62.5°	409.6	429.4	483.9	528.5	548.4
65°	363.4	384.8	442.7	485.6	505.4
67.5°	320.4	340.2	396.4	442.7	464.1
70°	270.9	297.3	355.1	401.4	421.2
72.5°	231.2	254.4	313.8	360.1	381.5
75°	185.0	213.1	272.5	318.8	335.3
77.5°	147.0	175.1	231.2	267.6	275.8
80°	107.4	135.4	188.3	206.5	211.4
82.5°	72.7	99.1	135.4	140.4	142.0
85°	44.6	61.1	79.3	79.3	79.3
87.5°	21.5	24.8	28.1	26.4	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)