

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: P271995

Luminaire Tested: **22CZ2-39HE-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: P271995  
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: 22CZ2-39HE-UNV-L940-CD1-U  
Description: 2'X2' TROFFER LED MODULE,RIBBED 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: 3357.0 lumens  
Efficiency: N/A  
Efficacy: 110.8 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

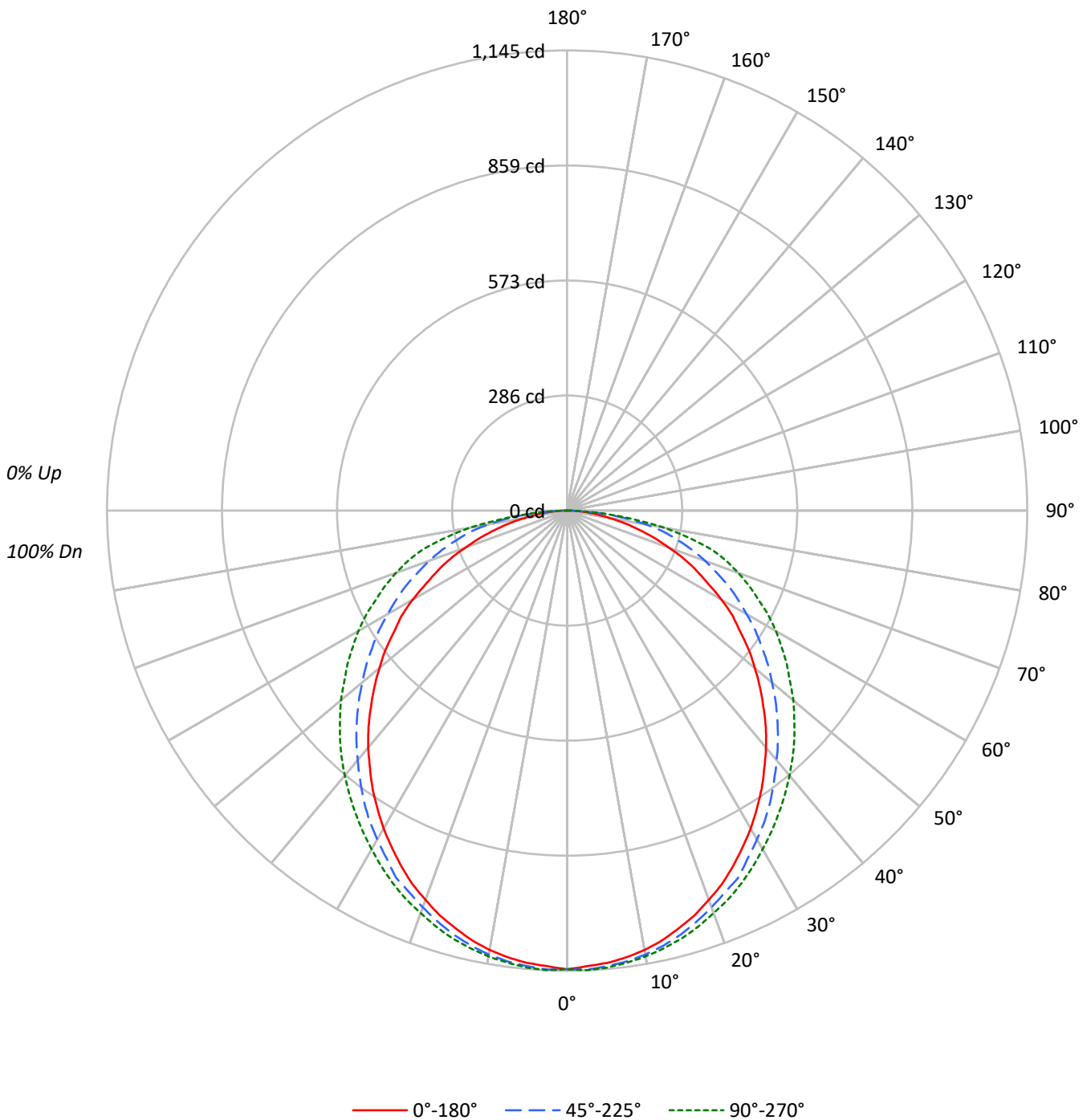
Input Watts (W): 30.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	3071	3071	3071
5°	3052	3074	3083
10°	3033	3065	3078
15°	2996	3042	3070
20°	2952	3009	3051
25°	2899	2992	3041
30°	2838	2936	3023
35°	2773	2898	3017
40°	2704	2849	3023
45°	2628	2816	3043
50°	2552	2787	3077
55°	2464	2775	3131
60°	2392	2774	3227
65°	2272	2819	3345
70°	2119	2873	3561
75°	1941	2972	3847
80°	1689	3098	3789
85°	1479	2754	3010



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.9	3.2
10°-20°	307.5	9.2
20°-30°	461.6	13.7
30°-40°	551.5	16.4
40°-50°	573.5	17.1
50°-60°	531.6	15.8
60°-70°	436.0	13.0
70°-80°	294.8	8.8
80°-90°	92.6	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°	877.0	26.1
0°-40°	1428.5	42.6
0°-60°	2533.6	75.5
0°-90°	3357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3357.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1141	1141	1141	1141	1141	
5°	1130	1132	1138	1140	1141	107
15°	1075	1080	1092	1098	1102	303
25°	976	984	1008	1019	1024	450
35°	844	856	882	908	918	528
45°	690	704	740	783	800	533
55°	525	542	591	644	667	472
65°	357	377	443	500	525	353
75°	187	218	286	344	370	198
85°	48	66	89	99	98	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1141.4	1141.4	1141.4	1141.4	1141.4
2.5°	1134.8	1138.1	1143.1	1144.7	1144.7
5°	1129.9	1131.5	1138.1	1139.8	1141.4
7.5°	1121.6	1124.9	1131.5	1133.2	1134.8
10°	1110.1	1113.4	1121.6	1124.9	1126.6
12.5°	1095.2	1098.5	1108.4	1113.4	1115.0
15°	1075.4	1080.3	1091.9	1098.5	1101.8
17.5°	1055.5	1060.5	1072.1	1082.0	1085.3
20°	1030.8	1042.3	1050.6	1063.8	1065.5
22.5°	1006.0	1012.6	1027.5	1040.7	1047.3
25°	976.3	984.5	1007.6	1019.2	1024.2
27.5°	944.9	956.4	974.6	992.8	999.4
30°	913.5	921.7	944.9	966.3	973.0
32.5°	878.8	890.4	915.1	936.6	946.5
35°	844.1	855.7	882.1	908.5	918.4
37.5°	806.1	819.3	845.8	877.1	890.4
40°	769.8	779.7	811.1	849.1	860.6
42.5°	731.8	743.3	776.4	817.7	830.9
45°	690.5	703.7	740.0	783.0	799.5
47.5°	650.8	664.1	703.7	746.6	766.5
50°	609.5	626.1	665.7	715.3	735.1
52.5°	569.9	584.8	629.4	680.6	698.7
55°	525.3	541.8	591.4	644.2	667.4
57.5°	489.0	500.5	555.0	609.5	632.7
60°	444.4	459.2	515.4	573.2	599.6
62.5°	396.4	421.2	479.0	538.5	564.9
65°	356.8	376.6	442.7	500.5	525.3
67.5°	315.5	337.0	401.4	462.5	490.6
70°	269.3	297.3	365.1	426.2	452.6
72.5°	228.0	257.7	327.1	386.5	414.6
75°	186.7	218.0	285.8	343.6	370.0
77.5°	147.0	181.7	247.8	292.4	308.9
80°	109.0	142.1	199.9	231.3	244.5
82.5°	76.0	104.1	147.0	163.5	166.8
85°	47.9	66.1	89.2	99.1	97.5
87.5°	21.5	26.4	33.0	36.3	34.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)