

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: P294860

Luminaire Tested: **22CZ2-44HE-HRP-UNV-L935-CD1-U**

Issue Date: 12/2/2019

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: P294860  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-44HE-HRP-UNV-L935-CD1-U  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
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: 3038.9 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

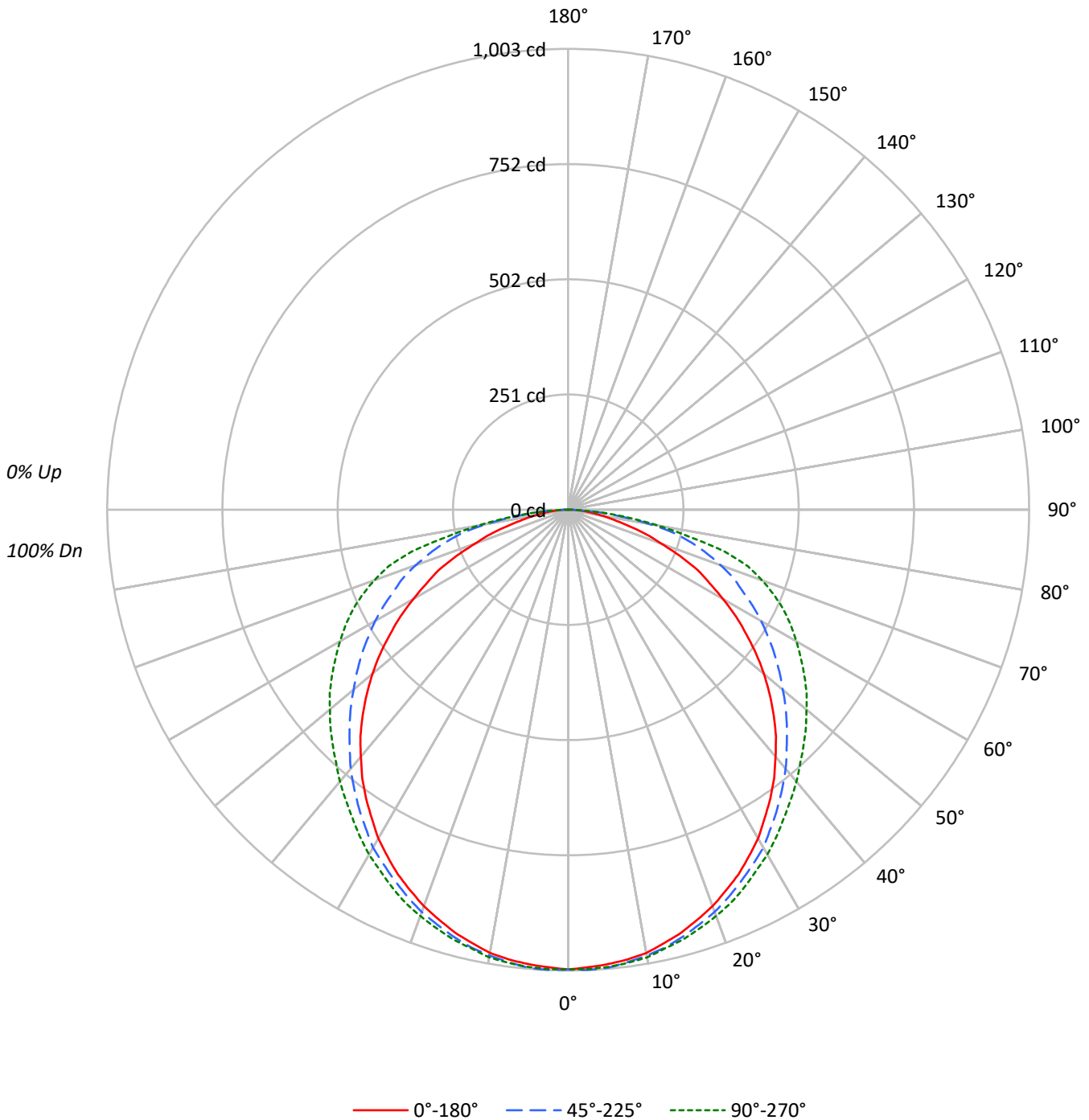
Input Watts (W): 35  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

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

	0°	45°	90°
0°	2693	2693	2693
5°	2682	2703	2698
10°	2677	2692	2703
15°	2654	2681	2697
20°	2629	2668	2695
25°	2601	2647	2692
30°	2567	2639	2692
35°	2519	2607	2689
40°	2465	2586	2714
45°	2407	2561	2758
50°	2327	2552	2833
55°	2221	2572	2941
60°	2094	2610	3085
65°	1978	2661	3296
70°	1689	2775	3530
75°	1415	2890	3667
80°	1159	2793	3059
85°	1007	2072	2248



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.8	3.1
10°-20°	271.3	8.9
20°-30°	411.1	13.5
30°-40°	496.5	16.3
40°-50°	521.7	17.2
50°-60°	490.8	16.2
60°-70°	409.2	13.5
70°-80°	271.2	8.9
80°-90°	72.3	2.4
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°	777.3	25.6
0°-40°	1273.7	41.9
0°-60°	2286.2	75.2
0°-90°	3038.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3038.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	993	995	1001	1001	999	94
15°	953	957	962	966	968	269
25°	876	882	891	903	907	403
35°	767	774	794	811	819	479
45°	633	642	673	707	725	487
55°	474	495	548	604	627	424
65°	311	337	418	487	518	302
75°	136	190	278	336	353	148
85°	33	50	67	73	73	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1000.7	1000.7	1000.7	1000.7	1000.7
2.5°	996.8	998.7	1002.6	1002.6	1000.7
5°	993.0	994.9	1000.7	1000.7	998.7
7.5°	987.2	989.2	993.0	996.8	994.9
10°	979.6	981.5	985.3	989.2	989.2
12.5°	966.2	968.1	975.7	977.7	977.7
15°	952.7	956.6	962.3	966.2	968.1
17.5°	935.5	939.3	947.0	954.7	954.7
20°	918.2	922.1	931.7	939.3	941.2
22.5°	897.1	902.9	912.5	922.1	925.9
25°	876.1	881.8	891.4	902.9	906.7
27.5°	851.1	856.9	870.3	883.7	885.6
30°	826.2	832.0	849.2	860.7	866.5
32.5°	795.5	803.2	820.5	837.7	843.5
35°	766.8	774.5	793.6	810.9	818.6
37.5°	736.1	743.8	764.9	786.0	795.5
40°	701.6	711.2	736.1	759.1	772.5
42.5°	669.0	678.6	703.5	734.2	747.6
45°	632.6	642.2	672.9	707.4	724.6
47.5°	594.3	605.8	642.2	684.4	701.6
50°	555.9	569.3	609.6	657.5	676.7
52.5°	515.7	532.9	578.9	630.7	653.7
55°	473.5	494.6	548.3	603.8	626.9
57.5°	433.2	452.4	515.7	575.1	600.0
60°	389.1	414.1	485.0	546.3	573.2
62.5°	347.0	373.8	452.4	517.6	546.3
65°	310.6	337.4	417.9	486.9	517.6
67.5°	262.6	299.0	389.1	454.3	485.0
70°	214.7	264.5	352.7	419.8	448.6
72.5°	178.3	226.2	316.3	383.4	410.2
75°	136.1	189.8	278.0	335.5	352.7
77.5°	101.6	157.2	237.7	266.5	268.4
80°	74.8	120.8	180.2	189.8	197.4
82.5°	51.8	84.3	116.9	128.4	132.3
85°	32.6	49.8	67.1	72.8	72.8
87.5°	17.3	19.2	23.0	23.0	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)