

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: P294816

Luminaire Tested: **14CZ2-48HE-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: P294816  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-48HE-HRP-UNV-L935-CD1-U  
Description: 1'X4' 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: 3093.4 lumens  
Efficiency: N/A  
Efficacy: 83.8 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

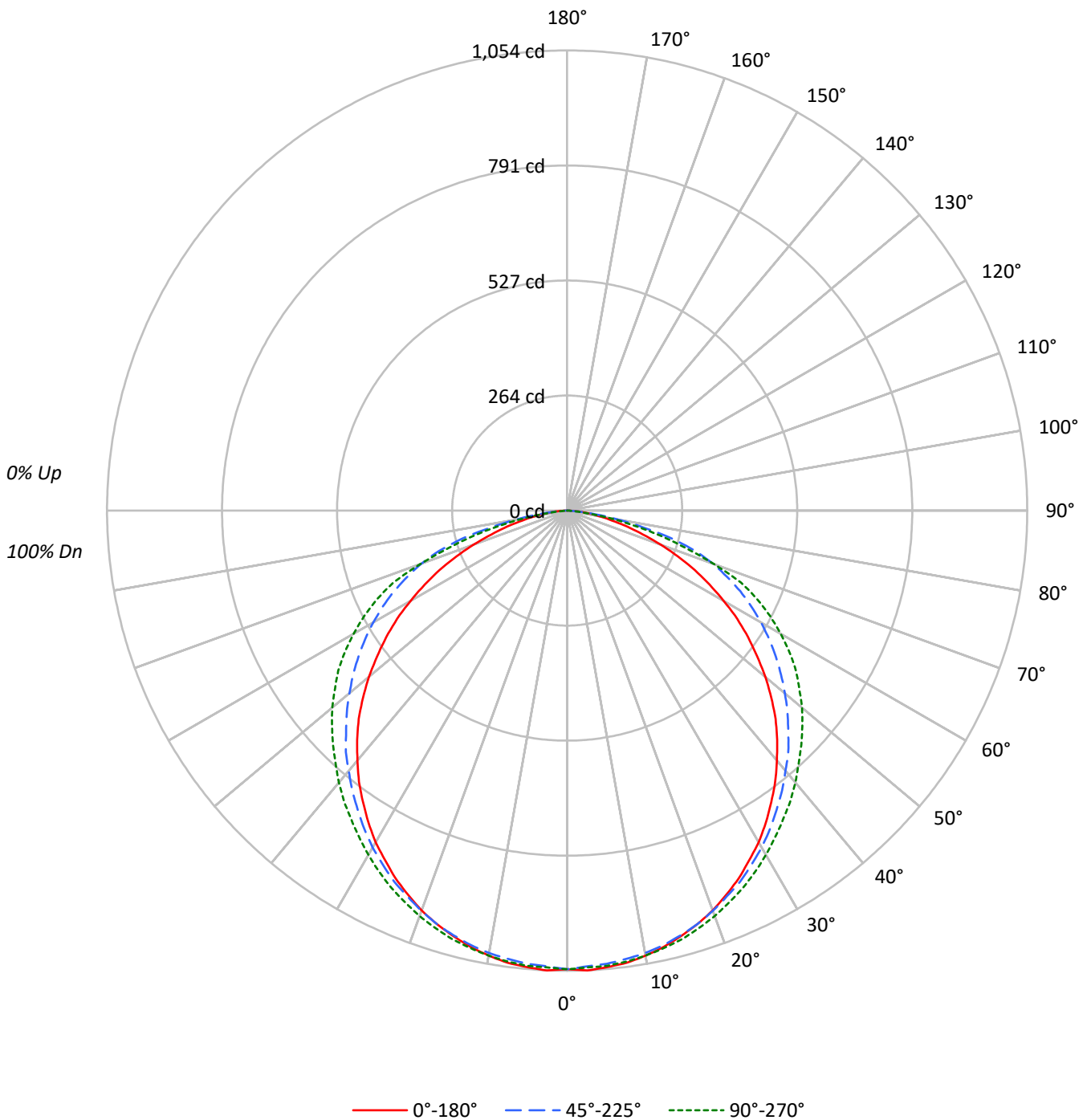
Input Watts (W): 36.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P294816

CATALOG NUMBER: 14CZ2-48HE-HRP-UNV-L935-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P294816

CATALOG NUMBER: 14CZ2-48HE-HRP-UNV-L935-CD1-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	2827	2827	2827
5°	2835	2814	2827
10°	2828	2812	2828
15°	2810	2805	2832
20°	2791	2794	2830
25°	2761	2784	2831
30°	2726	2769	2829
35°	2678	2748	2834
40°	2624	2734	2857
45°	2569	2724	2887
50°	2480	2725	2940
55°	2373	2738	3003
60°	2230	2759	3042
65°	2056	2787	3060
70°	1791	2793	2817
75°	1476	2599	2276
80°	1161	1869	1522
85°	902	719	361



TEST NUMBER: P294816

CATALOG NUMBER: 14CZ2-48HE-HRP-UNV-L935-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.5	3.2
10°-20°	285.4	9.2
20°-30°	433.4	14.0
30°-40°	525.1	17.0
40°-50°	553.4	17.9
50°-60°	516.6	16.7
60°-70°	412.8	13.3
70°-80°	227.2	7.3
80°-90°	40.1	1.3
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°	818.2	26.5
0°-40°	1343.4	43.4
0°-60°	2413.3	78.0
0°-90°	3093.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3093.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1050	1050	1050	1050	1050	
5°	1050	1047	1042	1049	1047	100
15°	1009	1009	1007	1016	1016	285
25°	930	932	938	951	953	428
35°	815	823	836	858	863	510
45°	675	688	716	748	759	519
55°	506	531	584	624	640	452
65°	323	364	438	474	480	318
75°	142	203	250	225	219	153
85°	29	37	23	15	12	36
90°	0	0	0	0	0	



TEST NUMBER: P294816

CATALOG NUMBER: 14CZ2-48HE-HRP-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1050.5	1050.5	1050.5	1050.5	1050.5
2.5°	1054.4	1051.5	1044.7	1050.5	1047.6
5°	1049.6	1046.6	1041.8	1048.6	1046.6
7.5°	1044.7	1040.8	1035.9	1043.7	1041.8
10°	1035.0	1032.1	1029.1	1035.9	1035.0
12.5°	1023.3	1022.3	1019.4	1027.2	1026.2
15°	1008.7	1008.7	1006.8	1016.5	1016.5
17.5°	993.1	992.2	993.1	1003.8	1002.9
20°	974.7	974.7	975.6	988.3	988.3
22.5°	952.3	953.3	956.2	971.7	970.8
25°	929.9	931.9	937.7	951.3	953.3
27.5°	902.7	907.5	914.4	930.9	932.8
30°	877.4	880.3	891.0	906.6	910.5
32.5°	847.2	853.1	864.7	882.3	887.1
35°	815.1	822.9	836.5	857.9	862.8
37.5°	783.0	789.9	808.3	830.7	839.5
40°	747.1	758.7	778.2	803.5	813.2
42.5°	712.0	723.7	750.0	776.2	785.0
45°	675.1	687.7	715.9	748.0	758.7
47.5°	634.2	648.8	684.8	718.8	730.5
50°	592.4	610.9	650.8	688.7	702.3
52.5°	548.6	572.0	617.7	657.6	670.2
55°	505.8	531.1	583.6	624.5	640.1
57.5°	462.0	489.3	548.6	595.3	604.1
60°	414.4	447.5	512.6	553.5	565.2
62.5°	367.7	405.6	475.7	514.6	524.3
65°	322.9	363.8	437.7	473.7	480.5
67.5°	274.3	322.9	395.9	429.0	430.9
70°	227.6	284.0	355.0	370.6	358.0
72.5°	181.9	242.2	307.4	294.7	284.0
75°	142.0	203.3	250.0	224.7	218.9
77.5°	105.1	166.3	179.0	165.4	154.7
80°	74.9	131.3	120.6	103.1	98.2
82.5°	51.6	82.7	66.1	51.6	44.7
85°	29.2	37.0	23.3	14.6	11.7
87.5°	12.6	8.8	4.9	3.9	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)