

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: P294803

Luminaire Tested: **14CZ2-39HE-HRP-UNV-L930-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: P294803  
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: 14CZ2-39HE-HRP-UNV-L930-CD1-U  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (196) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2481.7 lumens  
Efficiency: N/A  
Efficacy: 84.7 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

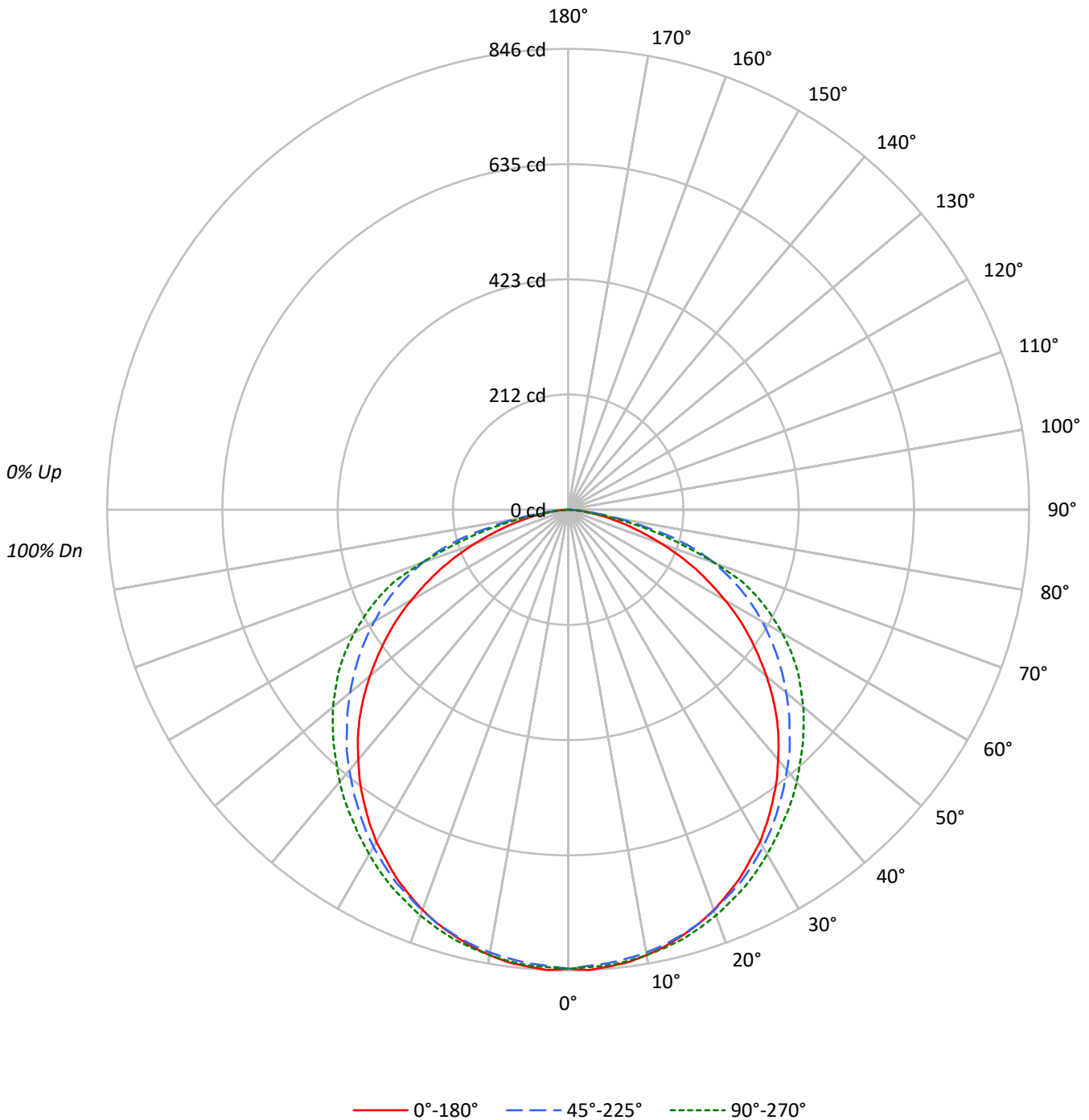
Input Watts (W): 29.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2268	2268	2268
5°	2274	2258	2268
10°	2269	2256	2269
15°	2255	2250	2272
20°	2239	2241	2271
25°	2215	2234	2271
30°	2187	2221	2270
35°	2148	2205	2274
40°	2105	2193	2292
45°	2061	2186	2316
50°	1990	2186	2359
55°	1904	2197	2409
60°	1789	2214	2440
65°	1650	2236	2455
70°	1437	2241	2260
75°	1184	2086	1826
80°	931	1500	1221
85°	722	577	290



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.8	3.2
10°-20°	229.0	9.2
20°-30°	347.7	14.0
30°-40°	421.3	17.0
40°-50°	443.9	17.9
50°-60°	414.4	16.7
60°-70°	331.2	13.3
70°-80°	182.3	7.3
80°-90°	32.2	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°	656.4	26.5
0°-40°	1077.7	43.4
0°-60°	1936.1	78.0
0°-90°	2481.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2481.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	843	843	843	843	843	
5°	842	840	836	841	840	80
15°	809	809	808	816	816	228
25°	746	748	752	763	765	343
35°	654	660	671	688	692	409
45°	542	552	574	600	609	417
55°	406	426	468	501	514	362
65°	259	292	351	380	386	255
75°	114	163	201	180	176	123
85°	23	30	19	12	9	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	842.8	842.8	842.8	842.8	842.8
2.5°	845.9	843.6	838.1	842.8	840.5
5°	842.0	839.7	835.8	841.2	839.7
7.5°	838.1	835.0	831.1	837.3	835.8
10°	830.3	828.0	825.6	831.1	830.3
12.5°	821.0	820.2	817.8	824.1	823.3
15°	809.3	809.3	807.7	815.5	815.5
17.5°	796.8	796.0	796.8	805.4	804.6
20°	781.9	781.9	782.7	792.9	792.9
22.5°	764.0	764.8	767.1	779.6	778.8
25°	746.0	747.6	752.3	763.2	764.8
27.5°	724.2	728.1	733.6	746.8	748.4
30°	703.9	706.2	714.8	727.3	730.4
32.5°	679.7	684.4	693.8	707.8	711.7
35°	654.0	660.2	671.1	688.3	692.2
37.5°	628.2	633.7	648.5	666.4	673.5
40°	599.3	608.7	624.3	644.6	652.4
42.5°	571.2	580.6	601.7	622.7	629.8
45°	541.6	551.7	574.4	600.1	608.7
47.5°	508.8	520.5	549.4	576.7	586.1
50°	475.3	490.1	522.1	552.5	563.4
52.5°	440.1	458.9	495.5	527.5	537.7
55°	405.8	426.1	468.2	501.0	513.5
57.5°	370.7	392.5	440.1	477.6	484.6
60°	332.4	359.0	411.3	444.0	453.4
62.5°	295.0	325.4	381.6	412.8	420.6
65°	259.1	291.9	351.2	380.0	385.5
67.5°	220.1	259.1	317.6	344.1	345.7
70°	182.6	227.9	284.8	297.3	287.2
72.5°	145.9	194.3	246.6	236.5	227.9
75°	113.9	163.1	200.6	180.3	175.6
77.5°	84.3	133.4	143.6	132.7	124.1
80°	60.1	105.4	96.8	82.7	78.8
82.5°	41.4	66.3	53.1	41.4	35.9
85°	23.4	29.7	18.7	11.7	9.4
87.5°	10.1	7.0	3.9	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)