

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: P294788

Luminaire Tested: **14CZ2-20-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: P294788
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: 14CZ2-20-HRP-UNV-L935-CD1-U
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (84) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1287.7 lumens
Efficiency: N/A
Efficacy: 79.0 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

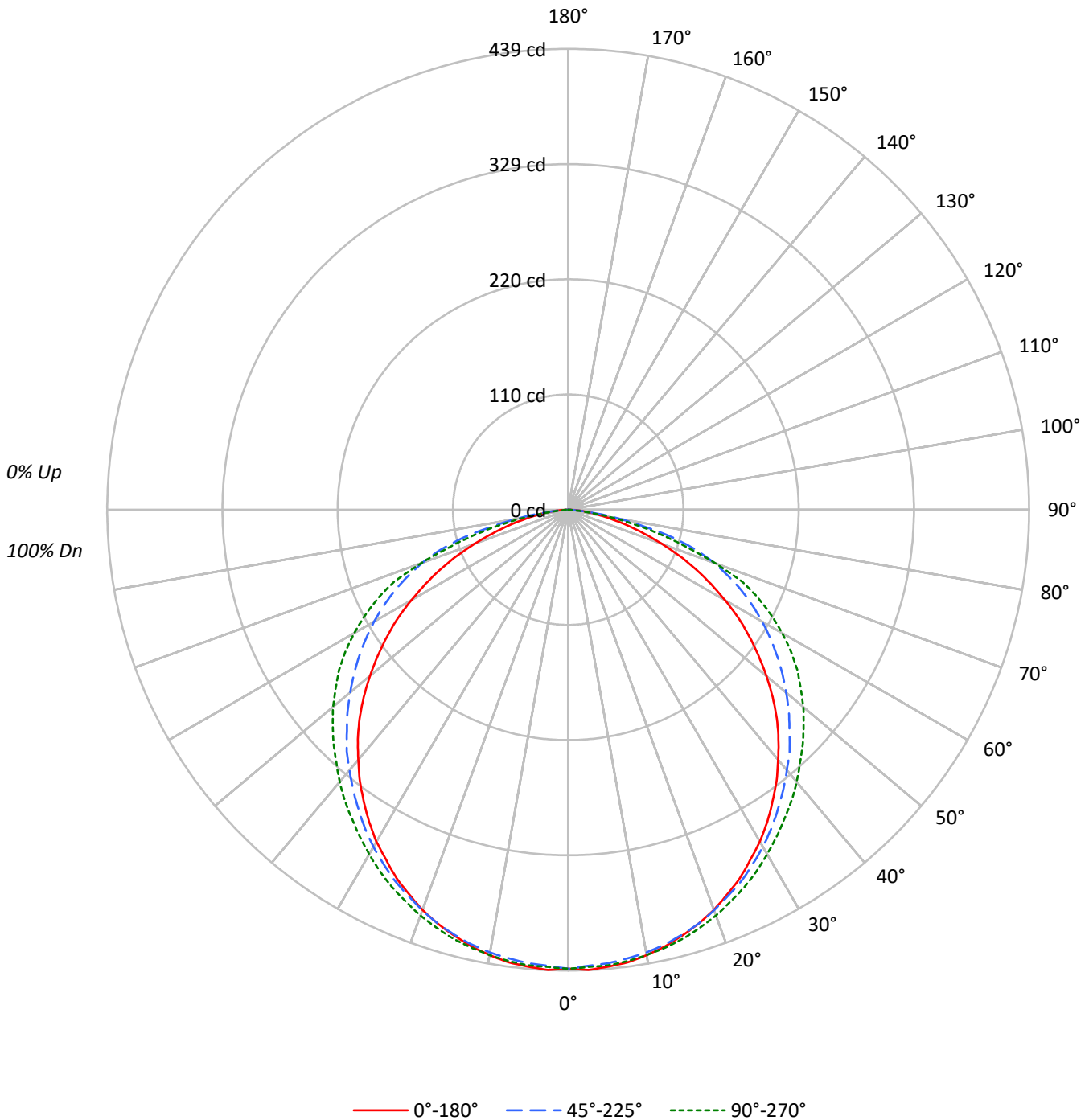
Input Watts (W): 16.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1177	1177	1177
5°	1180	1172	1177
10°	1177	1171	1177
15°	1170	1168	1179
20°	1162	1163	1178
25°	1149	1159	1178
30°	1135	1152	1178
35°	1115	1144	1180
40°	1092	1138	1189
45°	1069	1134	1202
50°	1032	1134	1224
55°	988	1140	1250
60°	928	1149	1266
65°	856	1160	1273
70°	745	1163	1172
75°	614	1082	947
80°	483	778	634
85°	374	299	151



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.4	3.2
10°-20°	118.8	9.2
20°-30°	180.4	14.0
30°-40°	218.6	17.0
40°-50°	230.3	17.9
50°-60°	215.1	16.7
60°-70°	171.8	13.3
70°-80°	94.6	7.3
80°-90°	16.7	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°	340.6	26.5
0°-40°	559.2	43.4
0°-60°	1004.6	78.0
0°-90°	1287.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1287.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	437	437	437	437	437	
5°	437	436	434	436	436	42
15°	420	420	419	423	423	119
25°	387	388	390	396	397	178
35°	339	343	348	357	359	212
45°	281	286	298	311	316	216
55°	211	221	243	260	266	188
65°	134	151	182	197	200	132
75°	59	85	104	94	91	64
85°	12	15	10	6	5	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	437.3	437.3	437.3	437.3	437.3
2.5°	438.9	437.7	434.9	437.3	436.1
5°	436.9	435.7	433.7	436.5	435.7
7.5°	434.9	433.3	431.2	434.5	433.7
10°	430.8	429.6	428.4	431.2	430.8
12.5°	426.0	425.6	424.3	427.6	427.2
15°	419.9	419.9	419.1	423.1	423.1
17.5°	413.4	413.0	413.4	417.9	417.5
20°	405.7	405.7	406.1	411.4	411.4
22.5°	396.4	396.8	398.0	404.5	404.1
25°	387.1	387.9	390.3	396.0	396.8
27.5°	375.8	377.8	380.6	387.5	388.3
30°	365.2	366.4	370.9	377.4	379.0
32.5°	352.7	355.1	360.0	367.3	369.3
35°	339.3	342.6	348.2	357.1	359.2
37.5°	326.0	328.8	336.5	345.8	349.4
40°	311.0	315.8	323.9	334.5	338.5
42.5°	296.4	301.3	312.2	323.1	326.8
45°	281.0	286.3	298.0	311.4	315.8
47.5°	264.0	270.1	285.1	299.2	304.1
50°	246.6	254.3	270.9	286.7	292.3
52.5°	228.4	238.1	257.1	273.7	279.0
55°	210.6	221.1	242.9	260.0	266.4
57.5°	192.3	203.7	228.4	247.8	251.5
60°	172.5	186.3	213.4	230.4	235.3
62.5°	153.1	168.8	198.0	214.2	218.2
65°	134.4	151.4	182.2	197.2	200.0
67.5°	114.2	134.4	164.8	178.6	179.4
70°	94.7	118.2	147.8	154.3	149.0
72.5°	75.7	100.8	128.0	122.7	118.2
75°	59.1	84.6	104.1	93.5	91.1
77.5°	43.7	69.2	74.5	68.8	64.4
80°	31.2	54.7	50.2	42.9	40.9
82.5°	21.5	34.4	27.5	21.5	18.6
85°	12.1	15.4	9.7	6.1	4.9
87.5°	5.3	3.6	2.0	1.6	1.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)