

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: P387941

Luminaire Tested: **22CZ2-39HE-SQR-UNV-L935-CD1-U**

Issue Date: 2/28/2020

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: P387941
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-39HE-SQR-UNV-L935-CD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3191.1 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

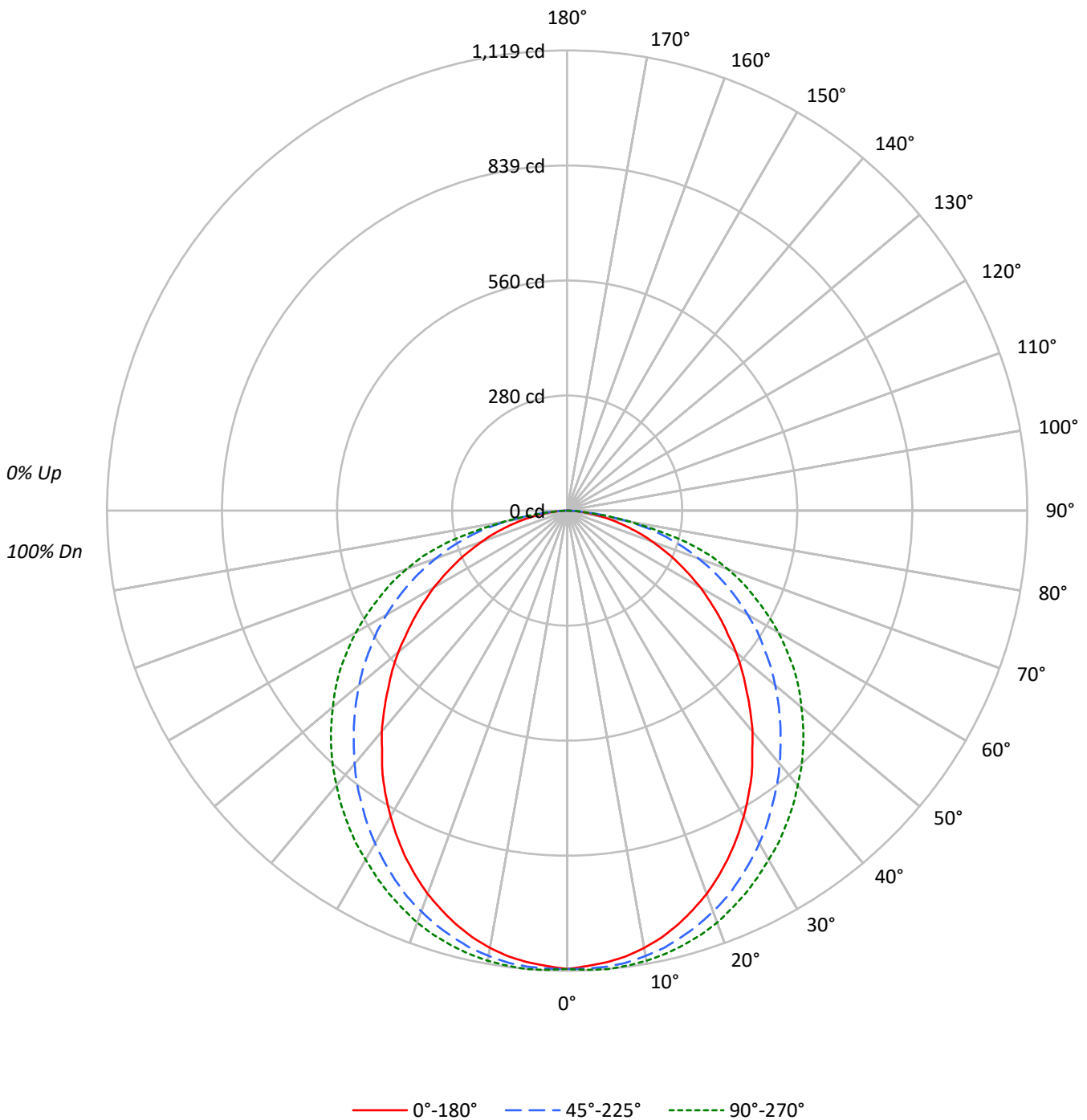
Input Watts (W): 30.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91		93	91	88		90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75		81	77	73		78	75	71	69
3	90	79	71	64	87	77	70	63	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	43
6	70	56	47	41	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3000	3000	3000
5°	2978	3007	3024
10°	2951	3005	3038
15°	2903	2992	3046
20°	2841	2971	3054
25°	2761	2941	3049
30°	2669	2904	3045
35°	2572	2861	3055
40°	2463	2825	3065
45°	2346	2790	3089
50°	2245	2765	3113
55°	2125	2743	3162
60°	2013	2731	3195
65°	1880	2710	3221
70°	1728	2670	3265
75°	1559	2598	3149
80°	1337	2300	2371
85°	1074	1355	1074



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.7	3.3
10°-20°	302.1	9.5
20°-30°	453.8	14.2
30°-40°	541.2	17.0
40°-50°	559.6	17.5
50°-60°	514.5	16.1
60°-70°	409.6	12.8
70°-80°	250.2	7.8
80°-90°	54.4	1.7
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°	861.6	27.0
0°-40°	1402.9	44.0
0°-60°	2476.9	77.6
0°-90°	3191.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3191.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1115	1115	1115	1115	1115	
5°	1103	1106	1113	1118	1119	105
15°	1042	1054	1074	1089	1094	293
25°	930	953	990	1018	1027	428
35°	783	816	871	916	930	489
45°	616	660	733	792	812	477
55°	453	503	585	651	674	405
65°	295	345	426	485	506	293
75°	150	194	250	294	303	160
85°	35	42	44	38	35	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1114.7	1114.7	1114.7	1114.7	1114.7
2.5°	1108.7	1110.2	1114.7	1117.8	1117.8
5°	1102.6	1105.6	1113.2	1117.8	1119.3
7.5°	1093.5	1098.1	1108.7	1114.7	1116.2
10°	1079.9	1086.0	1099.6	1108.7	1111.7
12.5°	1063.2	1072.3	1089.0	1101.1	1104.1
15°	1042.0	1054.1	1073.8	1089.0	1093.5
17.5°	1017.8	1032.9	1057.2	1075.3	1081.4
20°	992.0	1007.2	1037.5	1058.7	1066.3
22.5°	961.8	981.4	1016.3	1040.5	1046.6
25°	929.9	952.7	990.5	1017.8	1026.9
27.5°	895.1	922.4	963.3	996.6	1004.2
30°	858.8	887.5	934.5	970.8	979.9
32.5°	820.9	854.2	904.2	945.1	957.2
35°	783.0	816.4	870.9	916.3	929.9
37.5°	739.1	778.5	839.1	886.0	902.7
40°	701.2	739.1	804.2	855.7	872.4
42.5°	658.8	699.7	767.9	823.9	843.6
45°	616.4	660.4	733.1	792.1	811.8
47.5°	577.1	621.0	696.7	758.8	778.5
50°	536.2	581.6	660.4	724.0	743.7
52.5°	492.2	542.2	624.0	687.6	710.3
55°	452.9	502.8	584.6	651.3	674.0
57.5°	412.0	463.5	548.3	611.9	633.1
60°	374.1	424.1	507.4	569.5	593.7
62.5°	333.2	384.7	466.5	527.1	549.8
65°	295.3	345.3	425.6	484.7	505.9
67.5°	257.5	307.5	383.2	439.2	463.5
70°	219.6	269.6	339.3	393.8	415.0
72.5°	186.3	230.2	296.9	346.8	366.5
75°	149.9	193.9	249.9	293.8	302.9
77.5°	116.6	156.0	203.0	222.6	225.7
80°	86.3	116.6	148.4	153.0	153.0
82.5°	57.6	80.3	92.4	93.9	92.4
85°	34.8	42.4	43.9	37.9	34.8
87.5°	12.1	12.1	7.6	4.5	1.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)