

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: P387944

Luminaire Tested: **22CZ2-39HE-SQR-UNV-L940-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: P387944
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-L940-CD1-U
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3224.1 lumens
Efficiency: N/A
Efficacy: 106.4 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

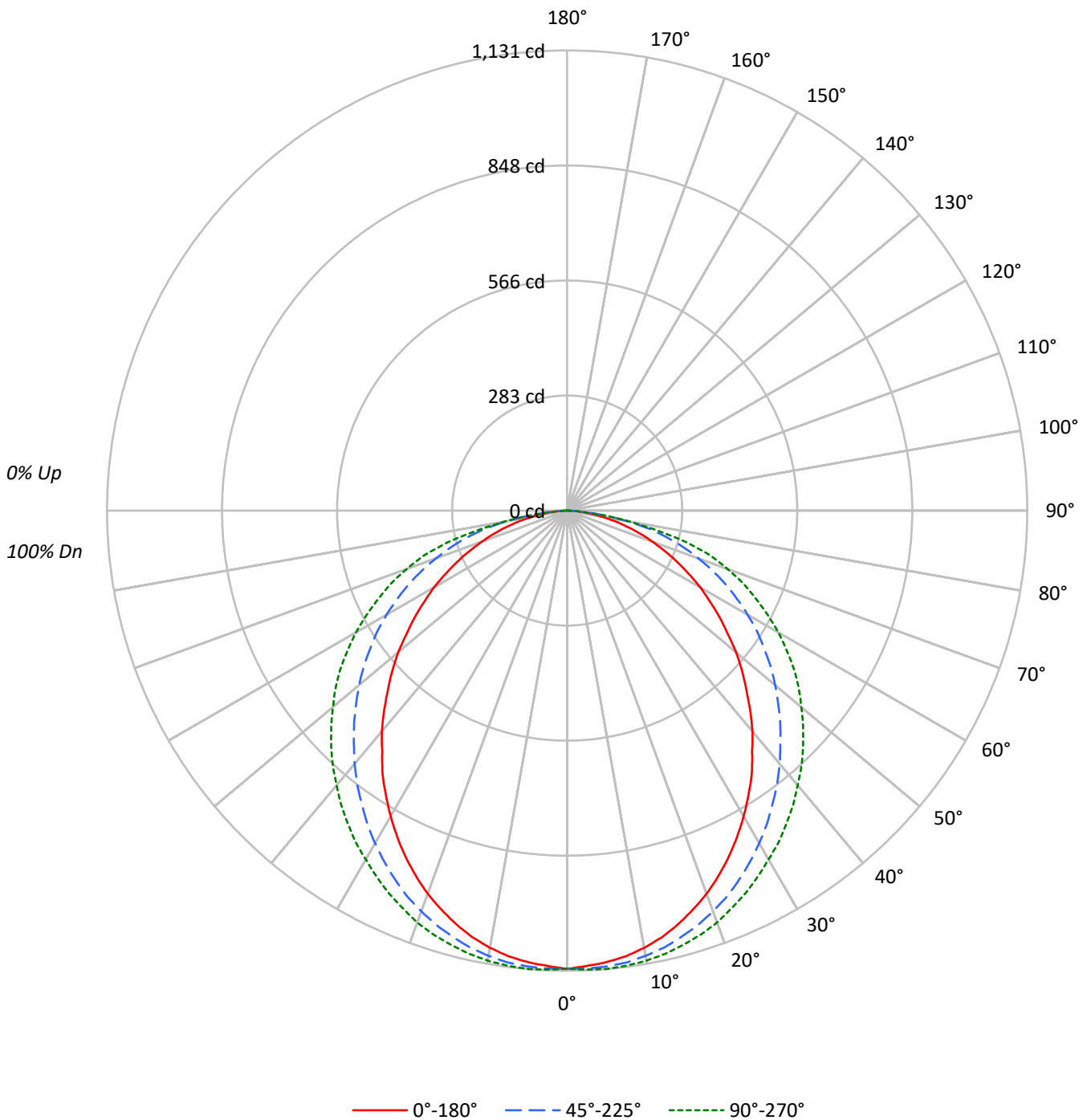
Input Watts (W): 30.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3031	3031	3031
5°	3009	3038	3055
10°	2981	3036	3069
15°	2933	3022	3078
20°	2870	3002	3085
25°	2790	2972	3081
30°	2696	2934	3077
35°	2599	2891	3087
40°	2489	2855	3096
45°	2370	2818	3121
50°	2268	2793	3145
55°	2146	2771	3195
60°	2034	2759	3229
65°	1900	2738	3254
70°	1746	2697	3299
75°	1575	2625	3182
80°	1351	2325	2396
85°	1087	1371	1087



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.8	3.3
10°-20°	305.3	9.5
20°-30°	458.5	14.2
30°-40°	546.8	17.0
40°-50°	565.4	17.5
50°-60°	519.8	16.1
60°-70°	413.8	12.8
70°-80°	252.8	7.8
80°-90°	55.0	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°	870.5	27.0
0°-40°	1417.4	44.0
0°-60°	2502.5	77.6
0°-90°	3224.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3224.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1126	1126	1126	1126	1126	
5°	1114	1117	1125	1129	1131	106
15°	1053	1065	1085	1100	1105	296
25°	940	962	1001	1028	1038	432
35°	791	825	880	926	940	494
45°	623	667	741	800	820	482
55°	458	508	591	658	681	409
65°	298	349	430	490	511	296
75°	152	196	252	297	306	161
85°	35	43	44	38	35	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1126.3	1126.3	1126.3	1126.3	1126.3
2.5°	1120.1	1121.7	1126.3	1129.3	1129.3
5°	1114.0	1117.1	1124.7	1129.3	1130.8
7.5°	1104.8	1109.4	1120.1	1126.3	1127.8
10°	1091.1	1097.2	1111.0	1120.1	1123.2
12.5°	1074.2	1083.4	1100.2	1112.5	1115.5
15°	1052.8	1065.0	1084.9	1100.2	1104.8
17.5°	1028.3	1043.6	1068.1	1086.5	1092.6
20°	1002.3	1017.6	1048.2	1069.6	1077.3
22.5°	971.7	991.6	1026.8	1051.3	1057.4
25°	939.6	962.5	1000.8	1028.3	1037.5
27.5°	904.4	931.9	973.2	1006.9	1014.5
30°	867.6	896.7	944.2	980.9	990.1
32.5°	829.4	863.1	913.6	954.9	967.1
35°	791.1	824.8	879.9	925.8	939.6
37.5°	746.8	786.5	847.8	895.2	912.0
40°	708.5	746.8	812.6	864.6	881.4
42.5°	665.7	707.0	775.8	832.4	852.3
45°	622.8	667.2	740.6	800.3	820.2
47.5°	583.0	627.4	703.9	766.6	786.5
50°	541.7	587.6	667.2	731.5	751.3
52.5°	497.3	547.8	630.5	694.7	717.7
55°	457.5	508.0	590.7	658.0	681.0
57.5°	416.2	468.3	553.9	618.2	639.6
60°	378.0	428.5	512.6	575.4	599.9
62.5°	336.7	388.7	471.3	532.5	555.5
65°	298.4	348.9	430.0	489.7	511.1
67.5°	260.1	310.6	387.2	443.8	468.3
70°	221.9	272.4	342.8	397.9	419.3
72.5°	188.2	232.6	299.9	350.4	370.3
75°	151.5	195.9	252.5	296.9	306.0
77.5°	117.8	157.6	205.1	224.9	228.0
80°	87.2	117.8	150.0	154.6	154.6
82.5°	58.1	81.1	93.3	94.9	93.3
85°	35.2	42.8	44.4	38.3	35.2
87.5°	12.2	12.2	7.7	4.6	1.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)