

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: P387822

Luminaire Tested: **22CZ2-29VHE-SQR-UNV-L940-CD1-SDWPD1-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: P387822  
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: 22CZ2-29VHE-SQR-UNV-L940-CD1-SDWPD1-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: 2492.6 lumens  
Efficiency: N/A  
Efficacy: 114.9 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

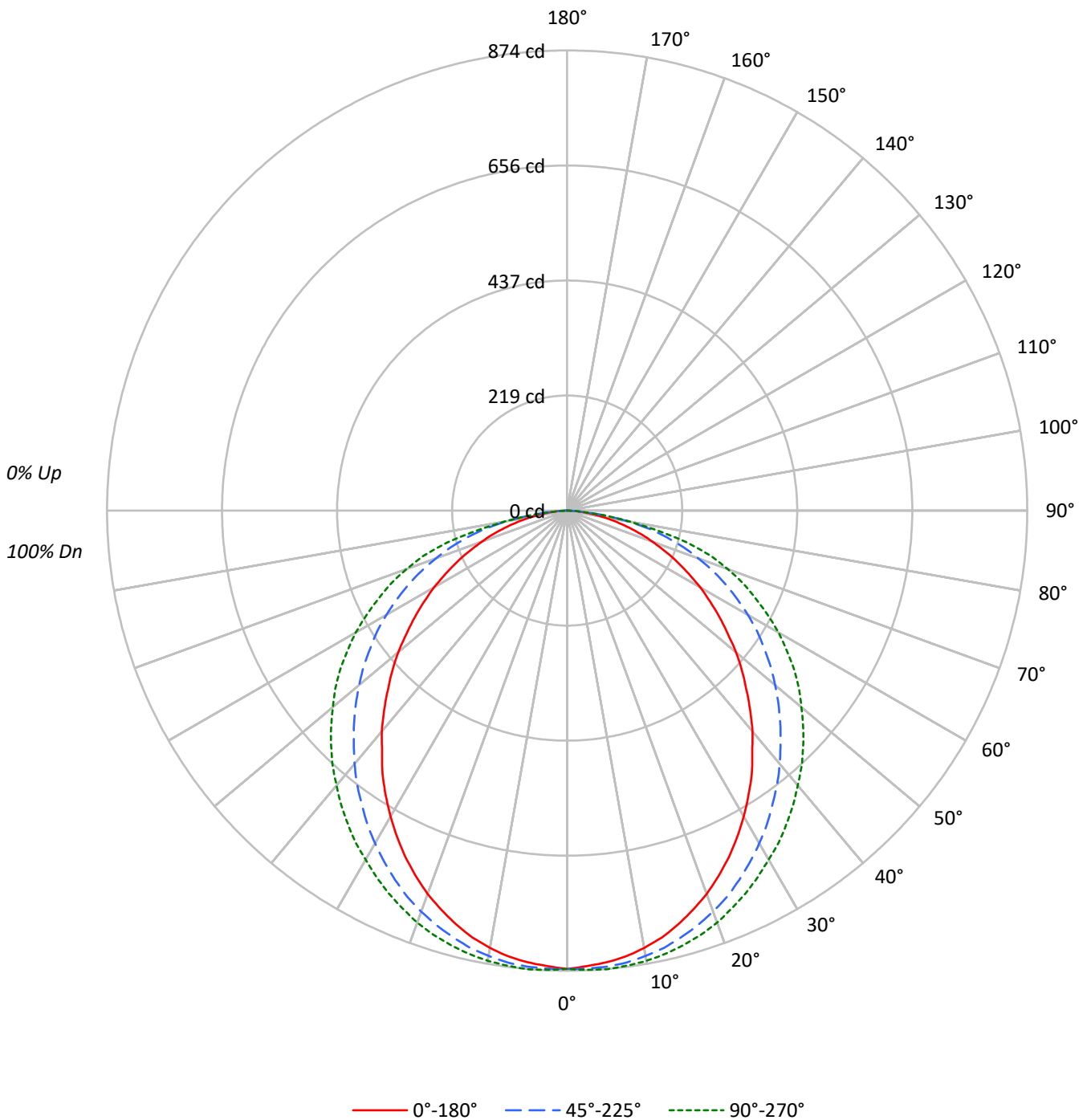
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2343	2343	2343
5°	2327	2349	2362
10°	2305	2347	2373
15°	2267	2337	2380
20°	2219	2321	2385
25°	2157	2297	2382
30°	2084	2268	2378
35°	2009	2235	2386
40°	1924	2207	2394
45°	1832	2179	2413
50°	1753	2159	2432
55°	1659	2143	2470
60°	1573	2133	2496
65°	1469	2117	2516
70°	1349	2085	2551
75°	1218	2030	2460
80°	1044	1796	1852
85°	840	1059	840



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.5	3.3
10°-20°	236.0	9.5
20°-30°	354.5	14.2
30°-40°	422.8	17.0
40°-50°	437.1	17.5
50°-60°	401.9	16.1
60°-70°	319.9	12.8
70°-80°	195.4	7.8
80°-90°	42.5	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°	673.0	27.0
0°-40°	1095.8	44.0
0°-60°	1934.7	77.6
0°-90°	2492.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2492.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	871	871	871	871	871	
5°	861	864	870	873	874	82
15°	814	823	839	851	854	229
25°	726	744	774	795	802	334
35°	612	638	680	716	726	382
45°	482	516	573	619	634	372
55°	354	393	457	509	526	316
65°	231	270	332	379	395	229
75°	117	151	195	230	237	125
85°	27	33	34	30	27	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	870.7	870.7	870.7	870.7	870.7
2.5°	866.0	867.2	870.7	873.1	873.1
5°	861.3	863.6	869.5	873.1	874.3
7.5°	854.2	857.7	866.0	870.7	871.9
10°	843.5	848.2	858.9	866.0	868.4
12.5°	830.5	837.6	850.6	860.1	862.4
15°	813.9	823.4	838.8	850.6	854.2
17.5°	795.0	806.8	825.8	840.0	844.7
20°	774.9	786.7	810.4	827.0	832.9
22.5°	751.2	766.6	793.8	812.8	817.5
25°	726.4	744.1	773.7	795.0	802.1
27.5°	699.2	720.5	752.4	778.4	784.4
30°	670.8	693.3	729.9	758.3	765.4
32.5°	641.2	667.2	706.3	738.2	747.7
35°	611.6	637.7	680.3	715.7	726.4
37.5°	577.3	608.1	655.4	692.1	705.1
40°	547.8	577.3	628.2	668.4	681.4
42.5°	514.6	546.6	599.8	643.6	659.0
45°	481.5	515.8	572.6	618.7	634.1
47.5°	450.7	485.1	544.2	592.7	608.1
50°	418.8	454.3	515.8	565.5	580.9
52.5°	384.5	423.5	487.4	537.1	554.9
55°	353.7	392.8	456.7	508.7	526.5
57.5°	321.8	362.0	428.3	478.0	494.5
60°	292.2	331.3	396.3	444.8	463.8
62.5°	260.3	300.5	364.4	411.7	429.4
65°	230.7	269.7	332.4	378.6	395.1
67.5°	201.1	240.2	299.3	343.1	362.0
70°	171.5	210.6	265.0	307.6	324.2
72.5°	145.5	179.8	231.9	270.9	286.3
75°	117.1	151.4	195.2	229.5	236.6
77.5°	91.1	121.9	158.5	173.9	176.3
80°	67.4	91.1	115.9	119.5	119.5
82.5°	45.0	62.7	72.2	73.3	72.2
85°	27.2	33.1	34.3	29.6	27.2
87.5°	9.5	9.5	5.9	3.5	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)