

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: P387823

Luminaire Tested: **22CZ2-29VHE-SQR-UNV-L940-CD1-SWPD1-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: P387823  
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-SWPD1-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: 2523.0 lumens  
Efficiency: N/A  
Efficacy: 116.3 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

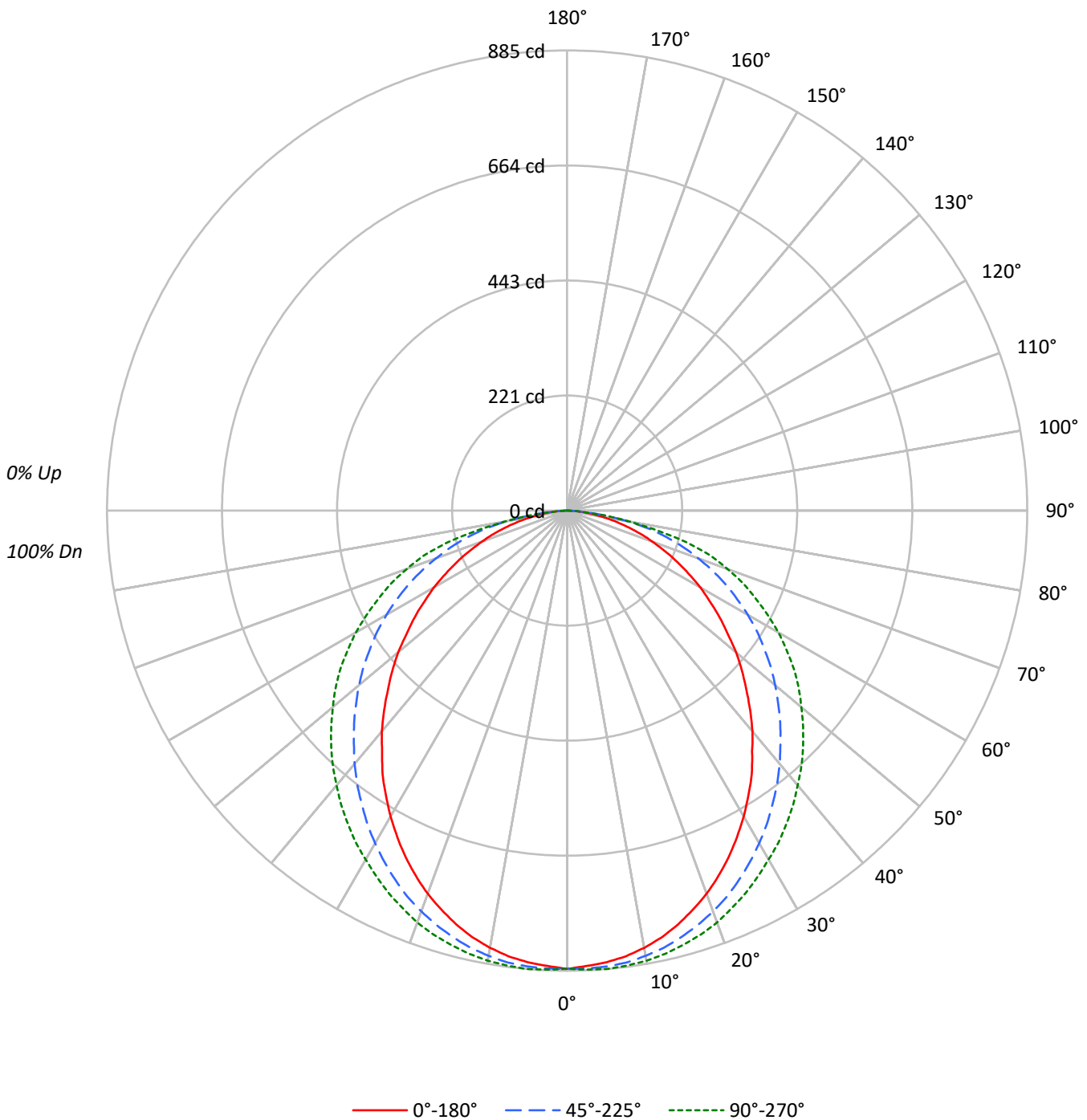
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2372	2372	2372
5°	2355	2377	2390
10°	2333	2376	2402
15°	2295	2365	2409
20°	2246	2349	2414
25°	2183	2325	2411
30°	2110	2296	2408
35°	2034	2262	2416
40°	1948	2234	2423
45°	1855	2206	2442
50°	1775	2186	2462
55°	1680	2168	2500
60°	1592	2159	2526
65°	1487	2143	2547
70°	1366	2110	2581
75°	1233	2054	2490
80°	1058	1819	1874
85°	849	1071	849



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.6	3.3
10°-20°	238.9	9.5
20°-30°	358.8	14.2
30°-40°	427.9	17.0
40°-50°	442.4	17.5
50°-60°	406.8	16.1
60°-70°	323.8	12.8
70°-80°	197.8	7.8
80°-90°	43.0	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°	681.2	27.0
0°-40°	1109.2	44.0
0°-60°	1958.3	77.6
0°-90°	2523.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2523.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	872	874	880	884	885	83
15°	824	833	849	861	865	232
25°	735	753	783	805	812	338
35°	619	645	689	724	735	386
45°	487	522	580	626	642	377
55°	358	398	462	515	533	320
65°	234	273	336	383	400	231
75°	119	153	198	232	240	126
85°	28	34	35	30	28	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	881.3	881.3	881.3	881.3	881.3
2.5°	876.6	877.8	881.3	883.7	883.7
5°	871.8	874.2	880.1	883.7	884.9
7.5°	864.6	868.2	876.6	881.3	882.5
10°	853.8	858.6	869.4	876.6	878.9
12.5°	840.6	847.8	861.0	870.6	873.0
15°	823.9	833.4	849.0	861.0	864.6
17.5°	804.7	816.7	835.8	850.2	855.0
20°	784.3	796.3	820.3	837.0	843.0
22.5°	760.4	776.0	803.5	822.7	827.5
25°	735.3	753.2	783.2	804.7	811.9
27.5°	707.7	729.3	761.6	787.9	793.9
30°	679.0	701.7	738.8	767.6	774.8
32.5°	649.0	675.4	714.9	747.2	756.8
35°	619.1	645.4	688.6	724.5	735.3
37.5°	584.4	615.5	663.4	700.5	713.7
40°	554.4	584.4	635.9	676.6	689.7
42.5°	520.9	553.2	607.1	651.4	667.0
45°	487.4	522.1	579.6	626.3	641.8
47.5°	456.2	491.0	550.8	599.9	615.5
50°	423.9	459.8	522.1	572.4	588.0
52.5°	389.2	428.7	493.4	543.7	561.6
55°	358.0	397.6	462.2	514.9	532.9
57.5°	325.7	366.4	433.5	483.8	500.5
60°	295.8	335.3	401.2	450.3	469.4
62.5°	263.4	304.2	368.8	416.7	434.7
65°	233.5	273.0	336.5	383.2	400.0
67.5°	203.6	243.1	303.0	347.3	366.4
70°	173.6	213.2	268.2	311.3	328.1
72.5°	147.3	182.0	234.7	274.2	289.8
75°	118.6	153.3	197.6	232.3	239.5
77.5°	92.2	123.3	160.5	176.0	178.4
80°	68.3	92.2	117.4	120.9	120.9
82.5°	45.5	63.5	73.0	74.2	73.0
85°	27.5	33.5	34.7	29.9	27.5
87.5°	9.6	9.6	6.0	3.6	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)