

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: P387439

Luminaire Tested: **14CZ2-29-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: P387439  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1911-580-2)  
Test Lab: INNOVATIONS CENTER(G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-29-SQR-UNV-L940-CD1-SWPD1-U  
Description: 1x4 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: 2332.6 lumens  
Efficiency: N/A  
Efficacy: 96.0 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.34 / 1.44  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

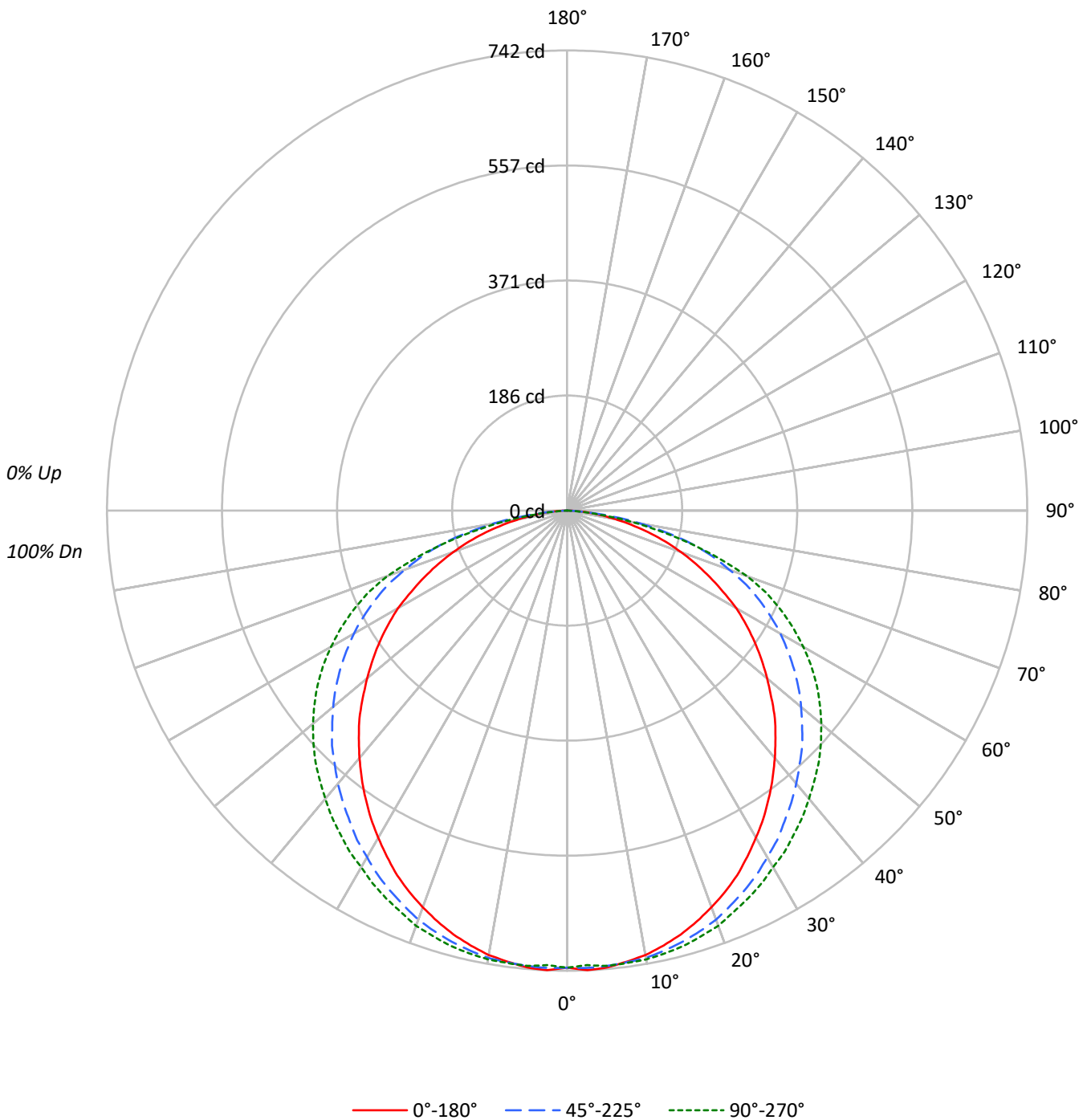
Input Watts (W): 24.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	99	95	105	101	97	93	97	93	90		93	90	87		89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	73		80	76	72		77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	59	56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	51		60	54	50	48
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		54	48	43	41
6	68	55	45	39	67	54	45	39	52	44	38		50	43	38		49	42	38	35
7	63	49	40	34	62	49	40	34	47	39	34		46	39	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		42	35	30		41	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27		38	32	27		37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24		36	29	24		35	29	24	22

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

	0°	45°	90°
0°	1984	1984	1984
5°	1998	1991	1991
10°	1988	2001	2008
15°	1972	2004	2024
20°	1949	2010	2040
25°	1927	2007	2049
30°	1892	2005	2064
35°	1862	2008	2093
40°	1829	2020	2131
45°	1803	2040	2183
50°	1762	2062	2239
55°	1732	2096	2305
60°	1696	2139	2366
65°	1617	2178	2425
70°	1536	2183	2423
75°	1406	2176	2139
80°	1203	1858	1658
85°	945	1053	618



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.1	3.0
10°-20°	202.4	8.7
20°-30°	309.5	13.3
30°-40°	379.3	16.3
40°-50°	408.0	17.5
50°-60°	392.0	16.8
60°-70°	326.4	14.0
70°-80°	200.3	8.6
80°-90°	44.6	1.9
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°	581.9	24.9
0°-40°	961.2	41.2
0°-60°	1761.2	75.5
0°-90°	2332.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2332.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	737	737	737	737	737	
5°	740	732	737	737	737	70
15°	708	705	720	724	726	200
25°	649	655	676	684	690	299
35°	567	581	611	628	637	355
45°	474	495	536	561	574	365
55°	369	401	447	477	491	330
65°	254	293	342	370	381	252
75°	135	176	209	208	206	143
85°	31	46	34	24	20	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	737.1	737.1	737.1	737.1	737.1
2.5°	741.8	734.8	738.3	737.1	733.6
5°	739.5	732.4	737.1	737.1	737.1
7.5°	733.6	727.7	734.8	735.9	735.9
10°	727.7	723.0	732.4	733.6	734.8
12.5°	718.3	714.8	726.5	728.9	731.2
15°	707.7	705.4	719.5	724.2	726.5
17.5°	694.8	696.0	711.3	717.1	719.5
20°	680.7	684.2	701.9	707.7	712.4
22.5°	665.4	670.1	688.9	696.0	700.7
25°	648.9	654.8	676.0	684.2	690.1
27.5°	629.0	638.4	661.9	672.5	678.3
30°	609.0	619.6	645.4	658.4	664.2
32.5°	589.0	600.7	630.1	643.1	652.5
35°	566.7	580.8	611.3	627.8	637.2
37.5°	544.3	560.8	593.7	612.5	623.1
40°	520.8	538.4	574.9	596.0	606.6
42.5°	497.3	517.3	554.9	578.4	590.2
45°	473.8	494.9	536.1	560.8	573.7
47.5°	446.7	472.6	513.8	542.0	554.9
50°	420.9	449.1	492.6	522.0	534.9
52.5°	395.0	424.4	470.3	500.8	513.8
55°	369.1	400.9	446.7	477.3	491.4
57.5°	342.1	375.0	422.1	453.8	466.7
60°	315.1	349.2	397.4	426.8	439.7
62.5°	283.3	323.3	370.3	399.7	411.5
65°	253.9	292.7	342.1	370.3	380.9
67.5°	224.5	264.5	312.7	338.6	348.0
70°	195.2	235.1	277.4	302.1	308.0
72.5°	165.8	205.7	245.7	259.8	257.5
75°	135.2	176.3	209.3	208.1	205.7
77.5°	105.8	145.8	165.8	157.5	154.0
80°	77.6	116.4	119.9	111.7	107.0
82.5°	52.9	83.5	75.2	65.8	61.1
85°	30.6	45.8	34.1	23.5	20.0
87.5°	12.9	11.8	3.5	3.5	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)