

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: P387558

Luminaire Tested: **14CZ2-48HE-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: P387558  
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: 14CZ2-48HE-SQR-UNV-L940-CD1-SDWPD1-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: 3860.5 lumens  
Efficiency: N/A  
Efficacy: 104.6 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

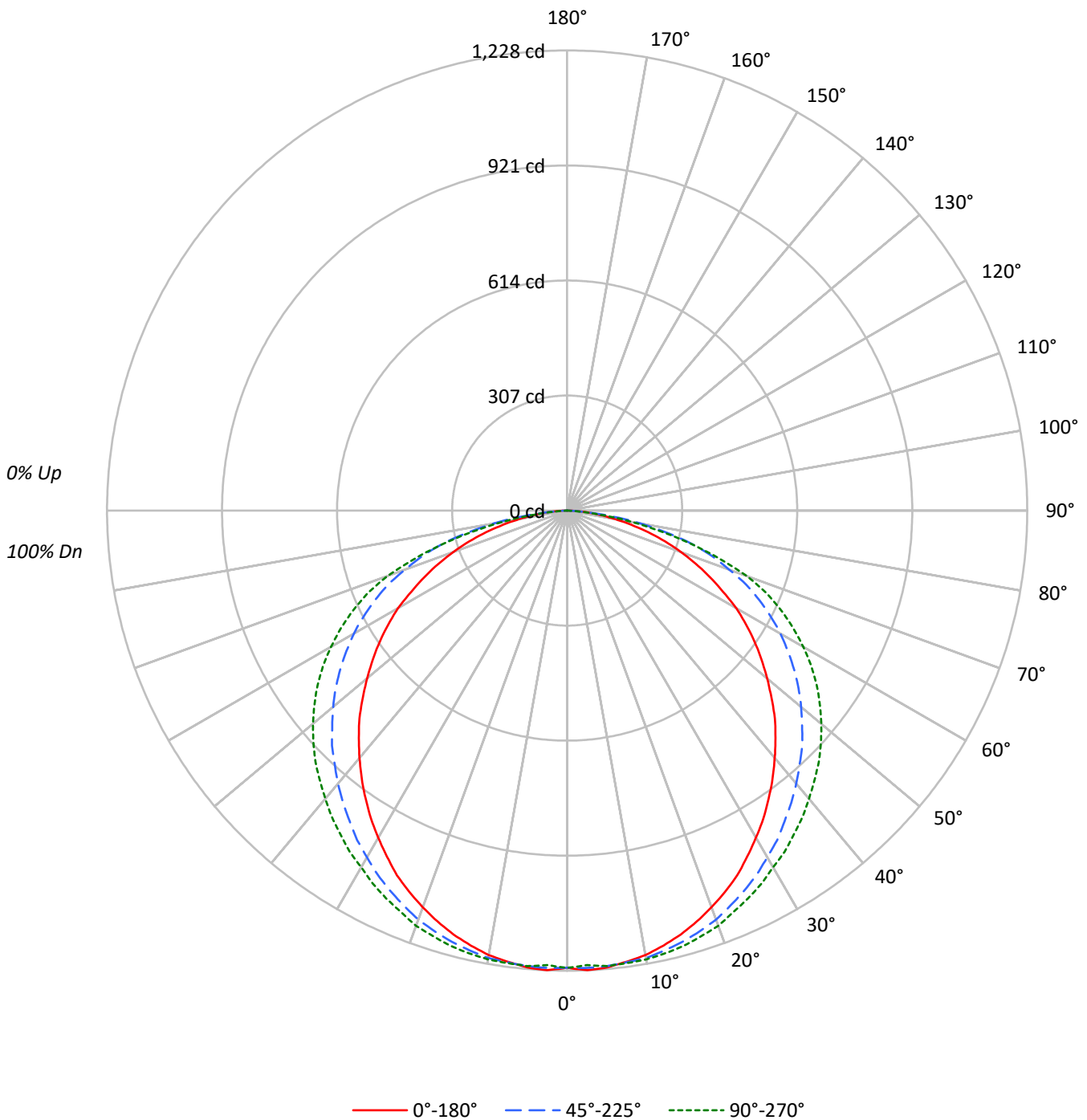
Input Watts (W): 36.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3283	3283	3283
5°	3306	3296	3296
10°	3291	3312	3323
15°	3263	3317	3350
20°	3226	3326	3377
25°	3189	3322	3391
30°	3132	3319	3416
35°	3081	3324	3464
40°	3028	3342	3527
45°	2984	3376	3613
50°	2916	3413	3706
55°	2866	3469	3816
60°	2806	3539	3916
65°	2676	3605	4014
70°	2541	3613	4011
75°	2327	3601	3540
80°	1990	3076	2744
85°	1562	1741	1022



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.9	3.0
10°-20°	334.9	8.7
20°-30°	512.2	13.3
30°-40°	627.8	16.3
40°-50°	675.2	17.5
50°-60°	648.8	16.8
60°-70°	540.2	14.0
70°-80°	331.6	8.6
80°-90°	73.9	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°	963.0	24.9
0°-40°	1590.8	41.2
0°-60°	2914.8	75.5
0°-90°	3860.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3860.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1220	1220	1220	1220	1220	
5°	1224	1212	1220	1220	1220	116
15°	1171	1167	1191	1198	1202	330
25°	1074	1084	1119	1132	1142	494
35°	938	961	1012	1039	1055	587
45°	784	819	887	928	950	603
55°	611	664	739	790	813	546
65°	420	484	566	613	630	416
75°	224	292	346	344	340	237
85°	51	76	56	39	33	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1220.0	1220.0	1220.0	1220.0	1220.0
2.5°	1227.7	1216.1	1221.9	1220.0	1214.1
5°	1223.8	1212.2	1220.0	1220.0	1220.0
7.5°	1214.1	1204.4	1216.1	1218.0	1218.0
10°	1204.4	1196.6	1212.2	1214.1	1216.1
12.5°	1188.8	1183.0	1202.4	1206.3	1210.2
15°	1171.3	1167.4	1190.8	1198.5	1202.4
17.5°	1149.9	1151.9	1177.1	1186.9	1190.8
20°	1126.6	1132.4	1161.6	1171.3	1179.1
22.5°	1101.3	1109.0	1140.2	1151.9	1159.6
25°	1074.0	1083.8	1118.8	1132.4	1142.1
27.5°	1040.9	1056.5	1095.4	1112.9	1122.7
30°	1007.9	1025.4	1068.2	1089.6	1099.3
32.5°	974.8	994.3	1042.9	1064.3	1079.9
35°	937.8	961.2	1011.8	1039.0	1054.6
37.5°	900.9	928.1	982.6	1013.7	1031.2
40°	861.9	891.1	951.4	986.5	1004.0
42.5°	823.0	856.1	918.4	957.3	976.7
45°	784.1	819.1	887.2	928.1	949.5
47.5°	739.4	782.2	850.3	897.0	918.4
50°	696.6	743.3	815.2	863.9	885.3
52.5°	653.8	702.4	778.3	828.9	850.3
55°	610.9	663.5	739.4	790.0	813.3
57.5°	566.2	620.7	698.5	751.0	772.4
60°	521.4	577.9	657.6	706.3	727.7
62.5°	468.9	535.1	612.9	661.5	681.0
65°	420.3	484.5	566.2	612.9	630.4
67.5°	371.6	437.8	517.6	560.4	575.9
70°	323.0	389.1	459.2	500.0	509.8
72.5°	274.3	340.5	406.7	430.0	426.1
75°	223.8	291.9	346.3	344.4	340.5
77.5°	175.1	241.3	274.3	260.7	254.9
80°	128.4	192.6	198.5	184.8	177.1
82.5°	87.6	138.1	124.5	109.0	101.2
85°	50.6	75.9	56.4	38.9	33.1
87.5°	21.4	19.5	5.8	5.8	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)