

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: P387559

Luminaire Tested: **14CZ2-48HE-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: P387559  
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-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: 3907.6 lumens  
Efficiency: N/A  
Efficacy: 105.9 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

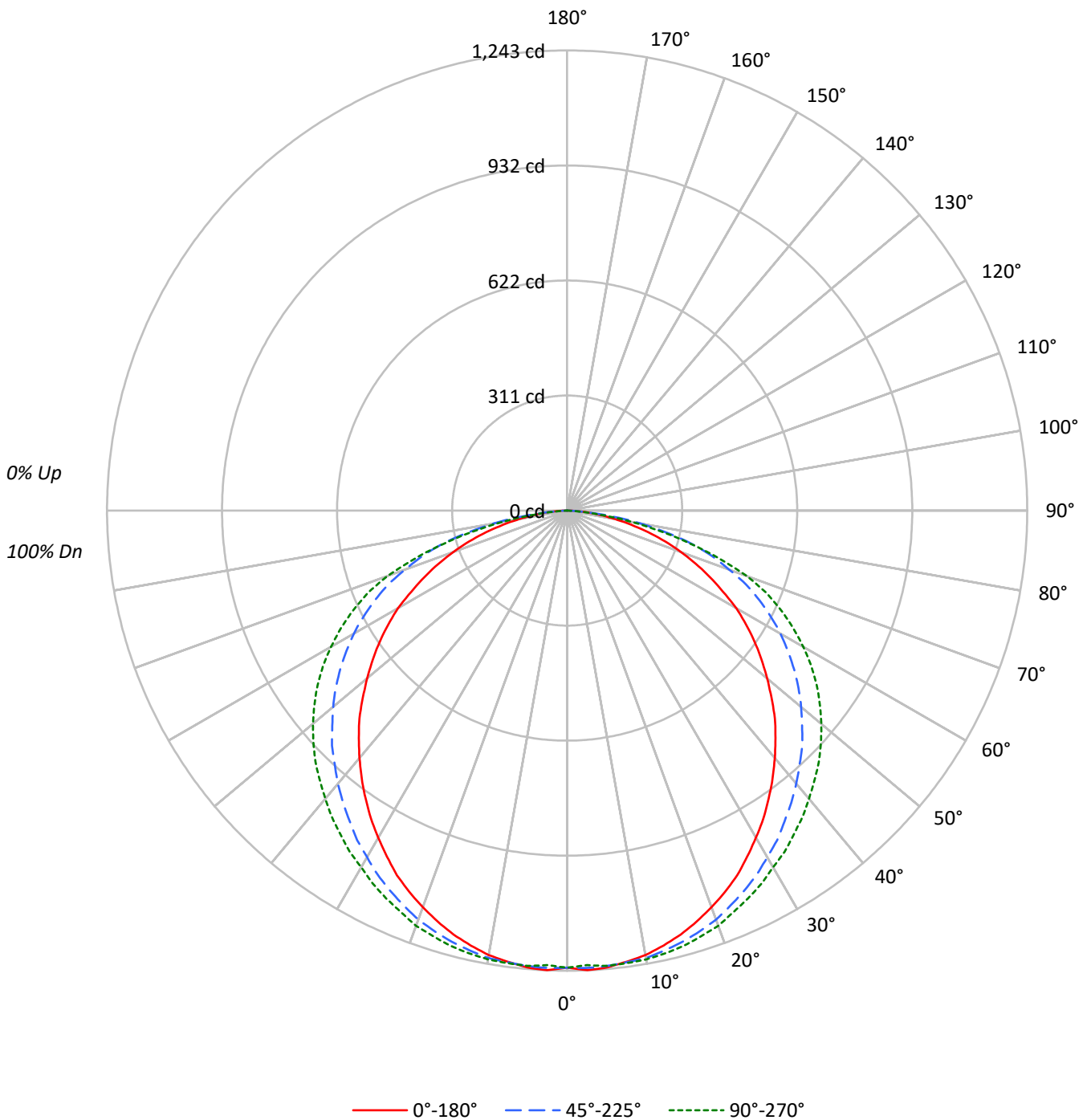
Input Watts (W): 36.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3323	3323	3323
5°	3346	3336	3336
10°	3331	3353	3363
15°	3303	3358	3391
20°	3265	3367	3418
25°	3228	3362	3433
30°	3170	3360	3457
35°	3119	3364	3506
40°	3065	3383	3570
45°	3021	3418	3658
50°	2952	3455	3751
55°	2901	3511	3862
60°	2841	3583	3964
65°	2709	3649	4063
70°	2572	3657	4060
75°	2355	3645	3584
80°	2015	3113	2777
85°	1581	1763	1034



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.4	3.0
10°-20°	339.0	8.7
20°-30°	518.4	13.3
30°-40°	635.5	16.3
40°-50°	683.4	17.5
50°-60°	656.7	16.8
60°-70°	546.8	14.0
70°-80°	335.6	8.6
80°-90°	74.8	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°	974.8	24.9
0°-40°	1610.2	41.2
0°-60°	2950.4	75.5
0°-90°	3907.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3907.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1235	1235	1235	1235	1235	
5°	1239	1227	1235	1235	1235	118
15°	1186	1182	1205	1213	1217	334
25°	1087	1097	1132	1146	1156	500
35°	949	973	1024	1052	1067	594
45°	794	829	898	939	961	611
55°	618	672	748	800	823	552
65°	425	490	573	620	638	421
75°	226	295	351	349	345	240
85°	51	77	57	39	34	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1234.8	1234.8	1234.8	1234.8	1234.8
2.5°	1242.7	1230.9	1236.8	1234.8	1228.9
5°	1238.8	1227.0	1234.8	1234.8	1234.8
7.5°	1228.9	1219.1	1230.9	1232.9	1232.9
10°	1219.1	1211.2	1227.0	1228.9	1230.9
12.5°	1203.3	1197.4	1217.1	1221.0	1225.0
15°	1185.6	1181.7	1205.3	1213.2	1217.1
17.5°	1163.9	1165.9	1191.5	1201.4	1205.3
20°	1140.3	1146.2	1175.8	1185.6	1193.5
22.5°	1114.7	1122.6	1154.1	1165.9	1173.8
25°	1087.1	1097.0	1132.4	1146.2	1156.1
27.5°	1053.6	1069.4	1108.8	1126.5	1136.4
30°	1020.2	1037.9	1081.2	1102.9	1112.7
32.5°	986.7	1006.4	1055.6	1077.3	1093.0
35°	949.3	972.9	1024.1	1051.7	1067.4
37.5°	911.8	939.4	994.6	1026.1	1043.8
40°	872.5	902.0	963.1	998.5	1016.2
42.5°	833.1	866.6	929.6	969.0	988.7
45°	793.7	829.1	898.1	939.4	961.1
47.5°	748.4	791.7	860.6	907.9	929.6
50°	705.1	752.3	825.2	874.4	896.1
52.5°	661.7	711.0	787.8	839.0	860.6
55°	618.4	671.6	748.4	799.6	823.2
57.5°	573.1	628.2	707.0	760.2	781.9
60°	527.8	584.9	665.7	714.9	736.6
62.5°	474.6	541.6	620.4	669.6	689.3
65°	425.4	490.4	573.1	620.4	638.1
67.5°	376.2	443.1	523.9	567.2	583.0
70°	326.9	393.9	464.8	506.1	516.0
72.5°	277.7	344.7	411.6	435.2	431.3
75°	226.5	295.4	350.6	348.6	344.7
77.5°	177.2	244.2	277.7	263.9	258.0
80°	130.0	195.0	200.9	187.1	179.2
82.5°	88.6	139.8	126.0	110.3	102.4
85°	51.2	76.8	57.1	39.4	33.5
87.5°	21.7	19.7	5.9	5.9	3.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)