

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: P388015

Luminaire Tested: **22CZ2-44HE-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: P388015  
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: 22CZ2-44HE-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: 3616.8 lumens  
Efficiency: N/A  
Efficacy: 103.3 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

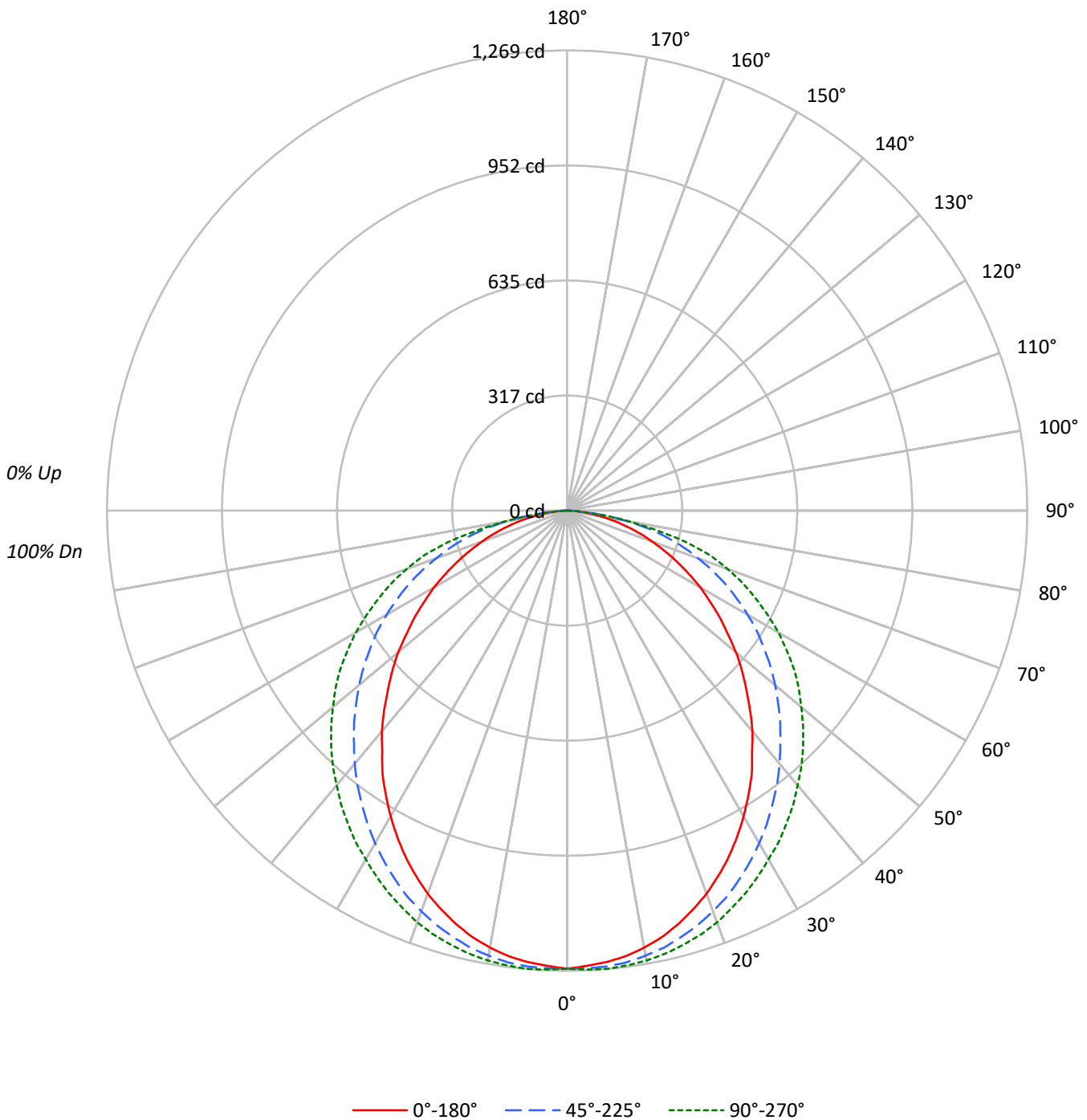
Input Watts (W): 35  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3400	3400	3400
5°	3376	3408	3427
10°	3345	3406	3443
15°	3290	3391	3453
20°	3220	3367	3461
25°	3130	3333	3456
30°	3024	3291	3451
35°	2916	3243	3462
40°	2792	3202	3473
45°	2659	3162	3502
50°	2544	3133	3529
55°	2408	3109	3584
60°	2282	3095	3622
65°	2131	3072	3651
70°	1958	3025	3701
75°	1766	2944	3569
80°	1516	2607	2687
85°	1220	1538	1220



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.8	3.3
10°-20°	342.5	9.5
20°-30°	514.3	14.2
30°-40°	613.4	17.0
40°-50°	634.2	17.5
50°-60°	583.1	16.1
60°-70°	464.2	12.8
70°-80°	283.6	7.8
80°-90°	61.6	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°	976.6	27.0
0°-40°	1590.0	44.0
0°-60°	2807.3	77.6
0°-90°	3616.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3616.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1263	1263	1263	1263	1263	
5°	1250	1253	1262	1267	1269	119
15°	1181	1195	1217	1234	1239	333
25°	1054	1080	1123	1154	1164	485
35°	888	925	987	1039	1054	554
45°	699	748	831	898	920	540
55°	513	570	663	738	764	459
65°	335	391	482	549	573	332
75°	170	220	283	333	343	181
85°	40	48	50	43	40	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1263.4	1263.4	1263.4	1263.4	1263.4
2.5°	1256.6	1258.3	1263.4	1266.9	1266.9
5°	1249.7	1253.1	1261.7	1266.9	1268.6
7.5°	1239.4	1244.6	1256.6	1263.4	1265.2
10°	1224.0	1230.8	1246.3	1256.6	1260.0
12.5°	1205.1	1215.4	1234.3	1248.0	1251.4
15°	1181.0	1194.8	1217.1	1234.3	1239.4
17.5°	1153.6	1170.7	1198.2	1218.8	1225.7
20°	1124.4	1141.6	1175.9	1199.9	1208.5
22.5°	1090.1	1112.4	1151.9	1179.3	1186.2
25°	1054.0	1079.8	1122.7	1153.6	1163.9
27.5°	1014.5	1045.4	1091.8	1129.5	1138.1
30°	973.3	1005.9	1059.2	1100.4	1110.7
32.5°	930.4	968.2	1024.8	1071.2	1084.9
35°	887.5	925.3	987.1	1038.6	1054.0
37.5°	837.7	882.3	951.0	1004.2	1023.1
40°	794.8	837.7	911.5	969.9	988.8
42.5°	746.7	793.1	870.3	933.8	956.2
45°	698.7	748.4	830.8	897.8	920.1
47.5°	654.0	703.8	789.6	860.0	882.3
50°	607.7	659.2	748.4	820.5	842.9
52.5°	557.9	614.6	707.2	779.3	805.1
55°	513.3	569.9	662.6	738.1	763.9
57.5°	466.9	525.3	621.4	693.5	717.5
60°	424.0	480.7	575.1	645.5	672.9
62.5°	377.7	436.0	528.7	597.4	623.1
65°	334.7	391.4	482.4	549.3	573.4
67.5°	291.8	348.5	434.3	497.8	525.3
70°	248.9	305.6	384.5	446.3	470.4
72.5°	211.1	260.9	336.5	393.1	415.4
75°	169.9	219.7	283.2	333.0	343.3
77.5°	132.2	176.8	230.0	252.3	255.8
80°	97.8	132.2	168.2	173.4	173.4
82.5°	65.2	91.0	104.7	106.4	104.7
85°	39.5	48.1	49.8	42.9	39.5
87.5°	13.7	13.7	8.6	5.1	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)