

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: P388562

Luminaire Tested: **24CZ2-35HE-SQR-UNV-L930-CD1-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: P388562  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35HE-SQR-UNV-L930-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2839.1 lumens  
Efficiency: N/A  
Efficacy: 105.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

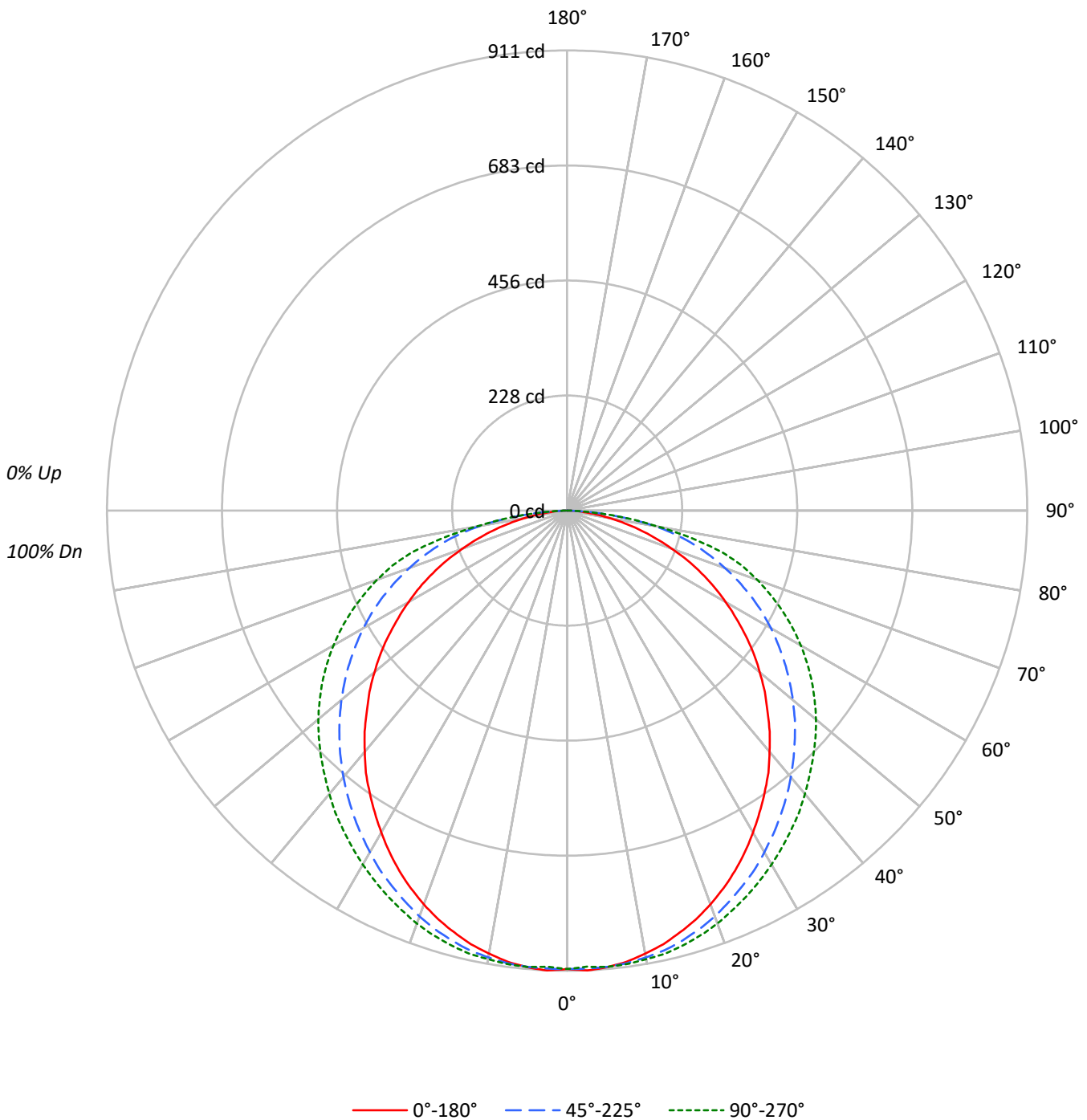
Input Watts (W): 26.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	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°	1221	1221	1221
5°	1226	1224	1224
10°	1217	1227	1232
15°	1204	1228	1241
20°	1188	1224	1246
25°	1168	1218	1250
30°	1143	1213	1257
35°	1120	1210	1269
40°	1095	1210	1286
45°	1067	1213	1311
50°	1042	1221	1346
55°	1012	1234	1388
60°	976	1254	1438
65°	934	1278	1498
70°	867	1309	1575
75°	784	1355	1647
80°	661	1358	1416
85°	506	1028	1028



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.1	3.0
10°-20°	247.8	8.7
20°-30°	376.5	13.3
30°-40°	457.9	16.1
40°-50°	487.5	17.2
50°-60°	464.4	16.4
60°-70°	388.3	13.7
70°-80°	258.9	9.1
80°-90°	71.6	2.5
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°	710.5	25.0
0°-40°	1168.4	41.2
0°-60°	2120.2	74.7
0°-90°	2839.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2839.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	908	908	908	908	908	
5°	908	902	907	907	907	86
15°	864	866	881	888	891	244
25°	787	797	820	834	842	362
35°	682	701	737	761	772	427
45°	561	591	638	673	689	433
55°	431	469	526	572	592	386
65°	293	337	401	451	471	290
75°	151	199	261	305	317	160
85°	33	61	67	66	67	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	907.5	907.5	907.5	907.5	907.5
2.5°	911.3	904.7	907.5	907.5	903.8
5°	907.5	901.9	906.6	906.6	906.6
7.5°	901.0	896.3	903.8	905.6	905.6
10°	890.6	888.8	898.1	901.0	901.9
12.5°	879.4	878.5	891.6	895.3	898.1
15°	864.4	866.3	881.3	887.8	890.6
17.5°	848.5	852.2	869.1	878.5	881.3
20°	829.7	835.3	855.0	864.4	870.0
22.5°	809.1	817.5	838.1	849.4	856.0
25°	786.6	796.9	820.3	834.4	841.9
27.5°	762.2	775.3	802.5	818.5	826.0
30°	735.9	750.9	780.9	799.7	809.1
32.5°	708.8	726.6	759.4	780.0	791.3
35°	681.6	701.3	736.9	761.3	772.5
37.5°	654.4	674.1	713.4	739.7	753.8
40°	623.4	646.9	689.1	718.1	732.2
42.5°	593.4	618.8	663.8	695.6	710.6
45°	560.6	590.6	637.5	673.1	689.1
47.5°	530.6	560.6	611.3	648.8	666.6
50°	497.8	529.7	583.1	624.4	643.1
52.5°	465.9	498.8	555.0	599.1	617.8
55°	431.3	468.8	525.9	571.9	591.6
57.5°	396.6	436.9	495.9	543.8	563.4
60°	362.8	404.1	465.9	513.8	534.4
62.5°	329.1	370.3	435.0	483.8	503.4
65°	293.4	336.6	401.3	450.9	470.6
67.5°	257.8	302.8	367.5	417.2	435.9
70°	220.3	268.1	332.8	381.6	400.3
72.5°	185.6	233.4	297.2	345.0	362.8
75°	150.9	198.8	260.6	304.7	316.9
77.5°	117.2	165.0	220.3	249.4	252.2
80°	85.3	130.3	175.3	183.8	182.8
82.5°	57.2	97.5	120.9	121.9	124.7
85°	32.8	60.9	66.6	65.6	66.6
87.5°	13.1	21.6	18.8	14.1	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)