

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: P388568

Luminaire Tested: **24CZ2-35HE-SQR-UNV-L940-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: P388568  
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-L940-CD1-U  
Description: 2x4 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: 2939.4 lumens  
Efficiency: N/A  
Efficacy: 109.3 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

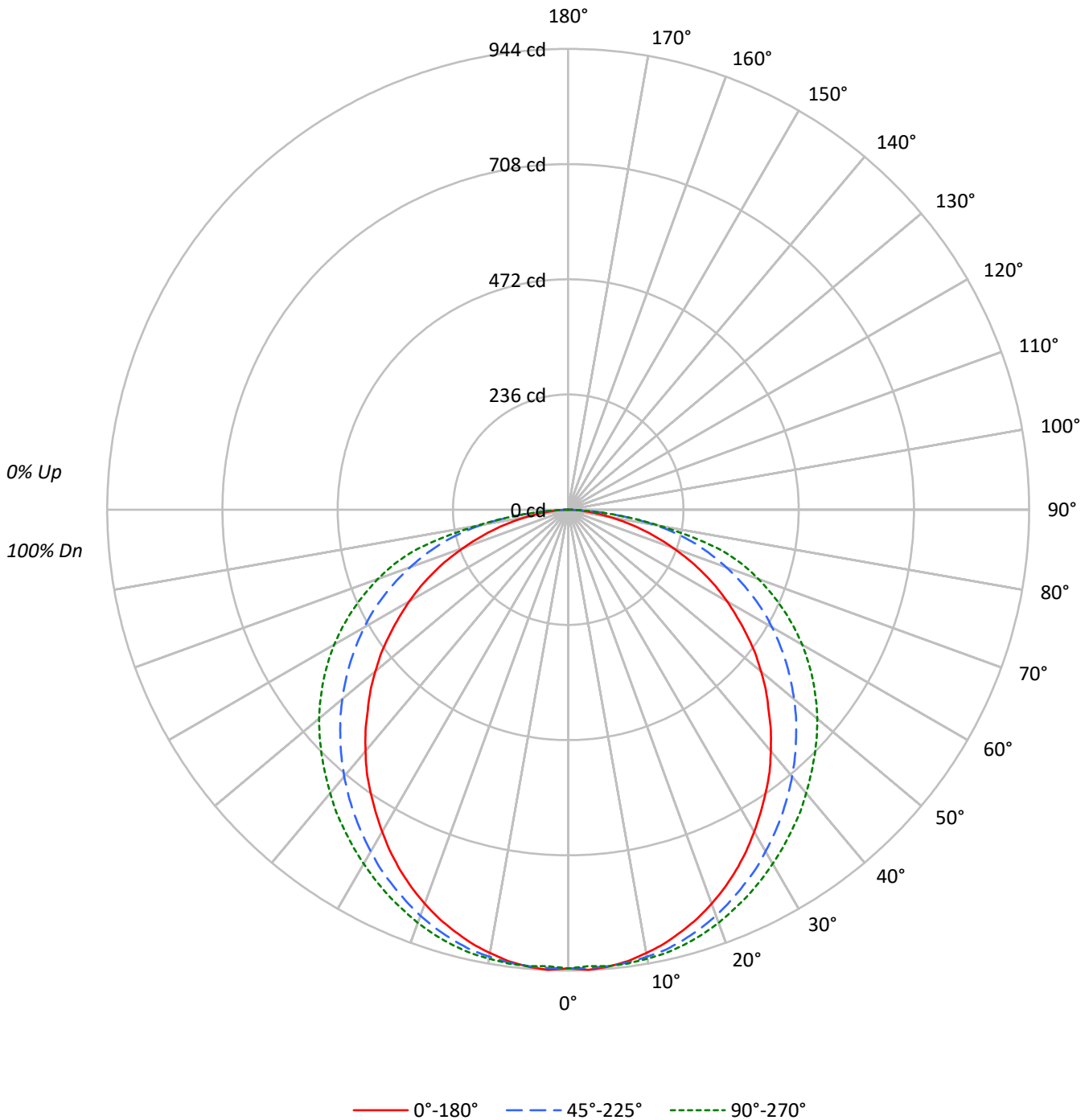
Input Watts (W): 26.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1264	1264	1264
5°	1269	1268	1268
10°	1260	1270	1276
15°	1247	1271	1284
20°	1230	1267	1290
25°	1209	1261	1294
30°	1184	1256	1301
35°	1159	1253	1314
40°	1134	1253	1332
45°	1104	1256	1357
50°	1079	1264	1394
55°	1047	1277	1437
60°	1011	1298	1489
65°	967	1323	1551
70°	897	1356	1631
75°	813	1403	1706
80°	684	1406	1467
85°	525	1064	1064



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.2	3.0
10°-20°	256.6	8.7
20°-30°	389.8	13.3
30°-40°	474.1	16.1
40°-50°	504.7	17.2
50°-60°	480.7	16.4
60°-70°	402.0	13.7
70°-80°	268.0	9.1
80°-90°	74.2	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°	735.6	25.0
0°-40°	1209.6	41.2
0°-60°	2195.1	74.7
0°-90°	2939.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2939.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	940	940	940	940	940	
5°	940	934	939	939	939	89
15°	895	897	912	919	922	252
25°	814	825	849	864	872	375
35°	706	726	763	788	800	442
45°	580	612	660	697	713	449
55°	446	485	544	592	612	399
65°	304	348	415	467	487	300
75°	156	206	270	316	328	166
85°	34	63	69	68	69	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	939.6	939.6	939.6	939.6	939.6
2.5°	943.5	936.7	939.6	939.6	935.7
5°	939.6	933.8	938.6	938.6	938.6
7.5°	932.8	927.9	935.7	937.6	937.6
10°	922.1	920.2	929.9	932.8	933.8
12.5°	910.5	909.5	923.1	927.0	929.9
15°	894.9	896.9	912.4	919.2	922.1
17.5°	878.4	882.3	899.8	909.5	912.4
20°	859.0	864.8	885.2	894.9	900.7
22.5°	837.7	846.4	867.7	879.4	886.2
25°	814.4	825.0	849.3	863.9	871.6
27.5°	789.1	802.7	830.9	847.4	855.1
30°	761.9	777.5	808.5	828.0	837.7
32.5°	733.8	752.2	786.2	807.6	819.2
35°	705.7	726.0	762.9	788.2	799.8
37.5°	677.5	697.9	738.7	765.8	780.4
40°	645.5	669.7	713.4	743.5	758.1
42.5°	614.4	640.6	687.2	720.2	735.7
45°	580.4	611.5	660.0	696.9	713.4
47.5°	549.4	580.4	632.9	671.7	690.1
50°	515.4	548.4	603.7	646.4	665.9
52.5°	482.4	516.4	574.6	620.2	639.6
55°	446.5	485.3	544.5	592.1	612.5
57.5°	410.6	452.3	513.5	563.0	583.4
60°	375.6	418.3	482.4	531.9	553.3
62.5°	340.7	383.4	450.4	500.8	521.2
65°	303.8	348.5	415.4	466.9	487.3
67.5°	266.9	313.5	380.5	431.9	451.3
70°	228.1	277.6	344.6	395.0	414.5
72.5°	192.2	241.7	307.7	357.2	375.6
75°	156.3	205.8	269.8	315.5	328.1
77.5°	121.3	170.8	228.1	258.2	261.1
80°	88.3	134.9	181.5	190.2	189.3
82.5°	59.2	100.9	125.2	126.2	129.1
85°	34.0	63.1	68.9	67.9	68.9
87.5°	13.6	22.3	19.4	14.6	14.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)