

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: P389717

Luminaire Tested: **24CZ2-35VHE-S-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: P389717
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-35VHE-S-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3164.8 lumens
Efficiency: N/A
Efficacy: 138.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

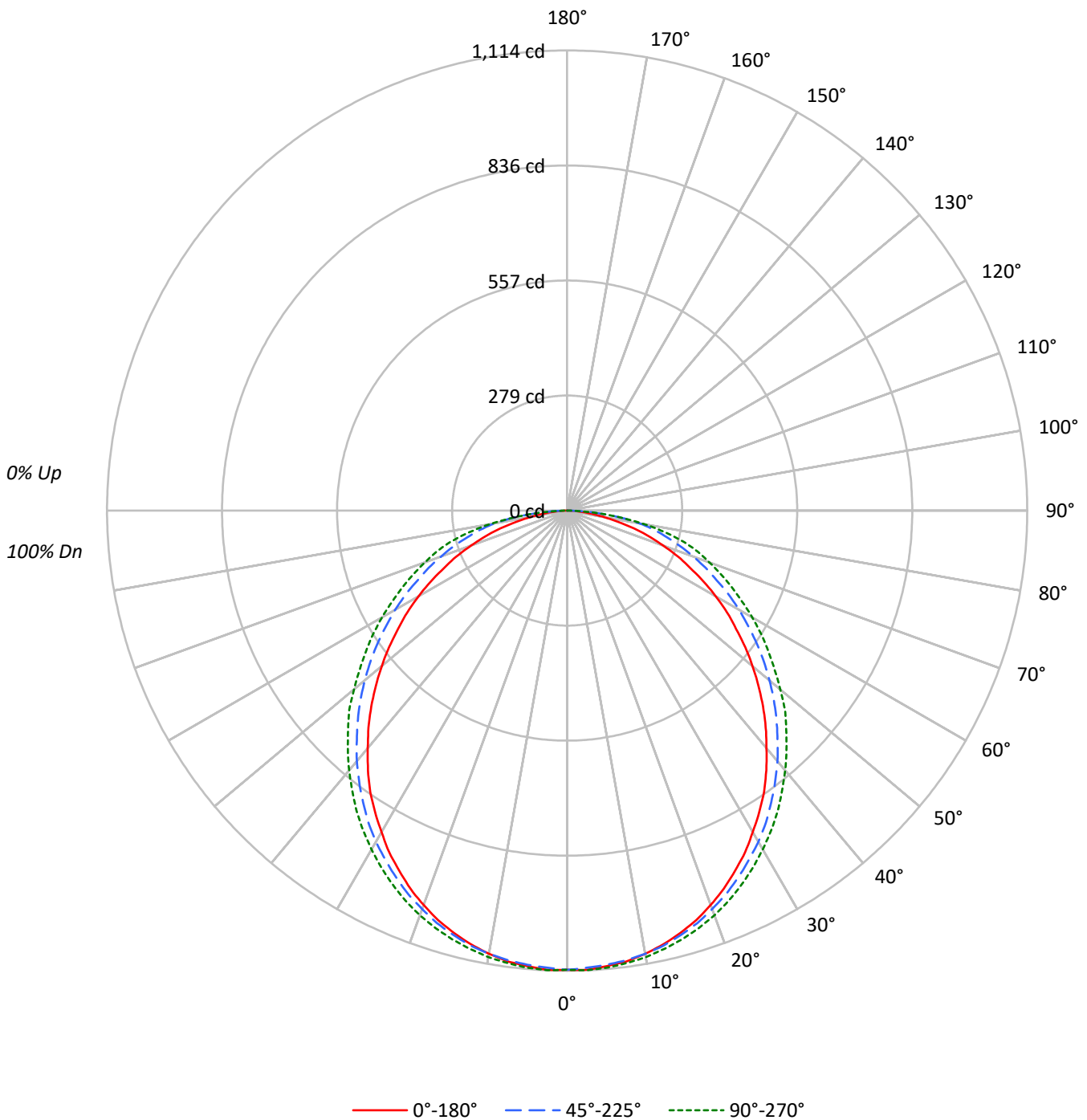
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	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°	1496	1496	1496
5°	1495	1491	1500
10°	1489	1489	1500
15°	1474	1482	1497
20°	1455	1470	1493
25°	1428	1455	1483
30°	1396	1438	1471
35°	1365	1415	1460
40°	1319	1391	1443
45°	1276	1364	1427
50°	1227	1338	1410
55°	1172	1313	1396
60°	1117	1293	1393
65°	1046	1271	1402
70°	969	1277	1439
75°	868	1301	1521
80°	701	1378	1488
85°	528	1210	1179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.3	3.3
10°-20°	300.8	9.5
20°-30°	452.1	14.3
30°-40°	538.5	17.0
40°-50°	551.1	17.4
50°-60°	496.2	15.7
60°-70°	389.7	12.3
70°-80°	252.9	8.0
80°-90°	78.2	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°	858.1	27.1
0°-40°	1396.6	44.1
0°-60°	2444.0	77.2
0°-90°	3164.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3164.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1112	1112	1112	1112	1112	
5°	1107	1109	1104	1110	1111	105
15°	1058	1062	1064	1073	1075	298
25°	962	970	980	996	999	443
35°	831	841	862	883	889	519
45°	670	687	717	744	750	517
55°	500	522	560	589	595	448
65°	329	354	399	432	440	327
75°	167	199	250	284	292	177
85°	34	63	78	76	76	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1111.8	1111.8	1111.8	1111.8	<i>1111.8</i>
2.5°	<i>1112.8</i>	<i>1112.8</i>	<i>1107.8</i>	<i>1112.8</i>	<i>1113.8</i>
5°	1106.8	1108.8	1103.8	1109.8	<i>1110.8</i>
7.5°	1100.8	1100.8	1097.7	1103.8	<i>1104.8</i>
10°	1089.7	1090.7	1089.7	1096.7	<i>1097.7</i>
12.5°	1075.6	1077.6	1078.6	1085.7	<i>1086.7</i>
15°	1058.5	1061.6	1063.6	1072.6	<i>1074.6</i>
17.5°	1039.4	1042.5	1047.5	1057.5	<i>1059.5</i>
20°	1016.3	1020.3	1026.4	1039.4	<i>1042.5</i>
22.5°	991.2	995.2	1005.3	1017.3	<i>1022.3</i>
25°	962.0	970.1	980.1	996.2	<i>999.2</i>
27.5°	932.9	939.9	953.0	970.1	<i>974.1</i>
30°	898.7	909.8	925.8	942.9	<i>947.0</i>
32.5°	865.5	876.6	895.7	913.8	<i>918.8</i>
35°	831.3	841.4	861.5	882.6	<i>888.6</i>
37.5°	792.1	805.2	827.3	848.4	<i>854.5</i>
40°	750.9	767.0	792.1	814.3	<i>821.3</i>
42.5°	711.7	728.8	753.9	778.1	<i>786.1</i>
45°	670.5	686.6	716.7	743.9	<i>749.9</i>
47.5°	628.3	646.4	678.5	705.7	<i>715.7</i>
50°	586.1	605.2	639.3	667.5	<i>673.5</i>
52.5°	543.8	563.9	600.1	630.3	<i>633.3</i>
55°	499.6	521.7	559.9	589.1	<i>595.1</i>
57.5°	459.4	478.5	519.7	549.9	<i>556.9</i>
60°	415.2	436.3	480.5	508.7	<i>517.7</i>
62.5°	373.0	395.1	441.3	469.5	<i>477.5</i>
65°	328.7	353.9	399.1	432.3	<i>440.3</i>
67.5°	290.5	314.6	362.9	395.1	<i>403.1</i>
70°	246.3	273.4	324.7	357.9	<i>365.9</i>
72.5°	208.1	236.2	287.5	319.7	<i>331.7</i>
75°	166.9	199.0	250.3	284.5	<i>292.5</i>
77.5°	126.7	163.9	216.1	242.3	<i>242.3</i>
80°	90.5	129.7	177.9	190.0	<i>192.0</i>
82.5°	59.3	97.5	131.7	130.7	<i>130.7</i>
85°	34.2	63.3	78.4	76.4	<i>76.4</i>
87.5°	13.1	26.1	28.1	28.1	<i>27.1</i>
90°	0.0	0.0	0.0	0.0	<i>0.0</i>

(END OF REPORT)