

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: P389713

Luminaire Tested: **24CZ2-35VHE-S-UNV-L935-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: P389713
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-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3093.6 lumens
Efficiency: N/A
Efficacy: 135.7 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

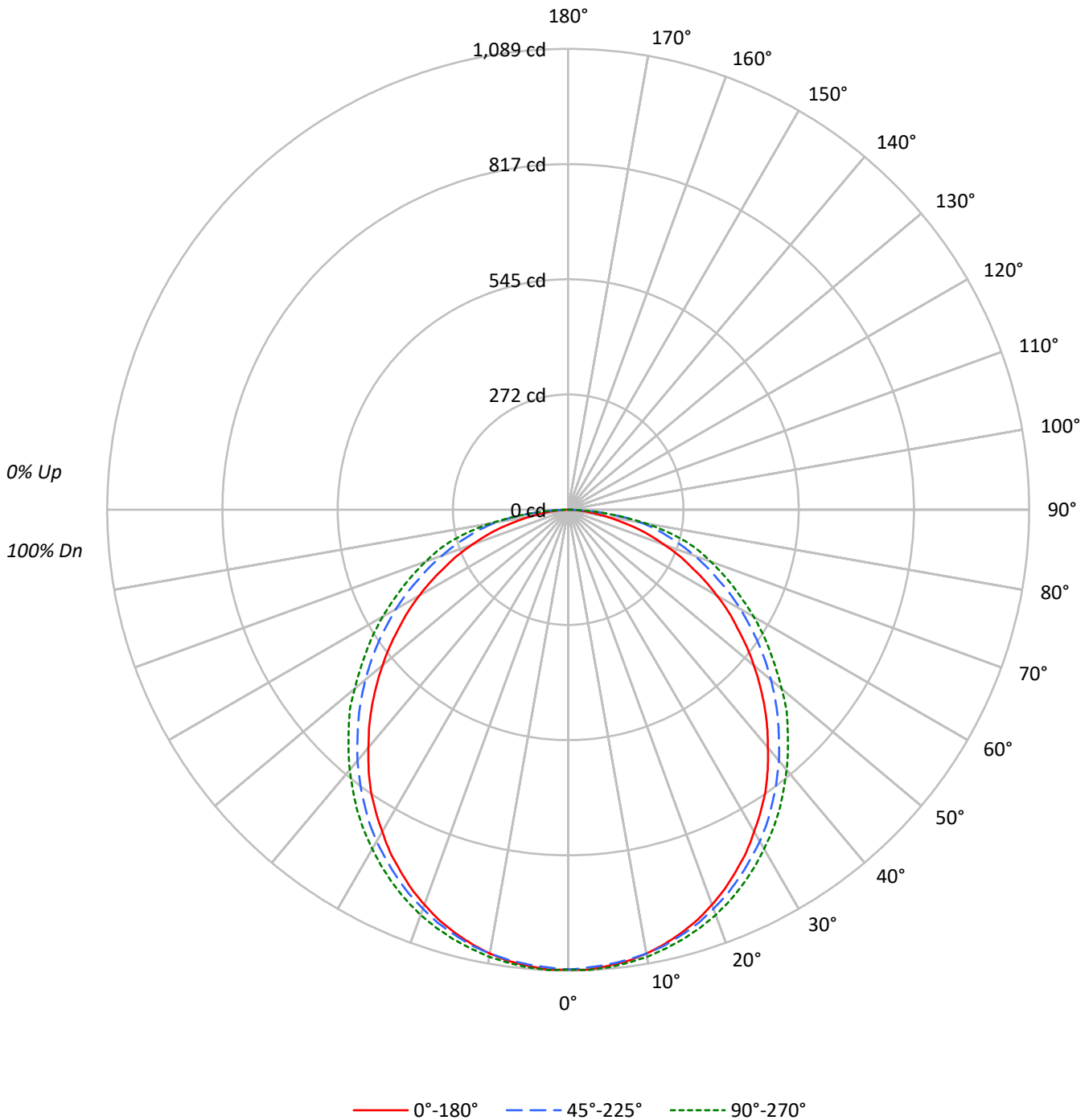
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1462	1462	1462
5°	1461	1457	1467
10°	1455	1455	1466
15°	1441	1448	1463
20°	1423	1437	1459
25°	1396	1422	1450
30°	1365	1406	1438
35°	1335	1383	1427
40°	1289	1360	1410
45°	1247	1333	1395
50°	1199	1308	1378
55°	1146	1284	1365
60°	1092	1264	1362
65°	1023	1242	1370
70°	947	1249	1407
75°	848	1272	1486
80°	685	1347	1454
85°	516	1183	1153



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.9	3.3
10°-20°	294.0	9.5
20°-30°	441.9	14.3
30°-40°	526.4	17.0
40°-50°	538.8	17.4
50°-60°	485.0	15.7
60°-70°	380.9	12.3
70°-80°	247.2	8.0
80°-90°	76.4	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
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0°-30°	838.8	27.1
0°-40°	1365.2	44.1
0°-60°	2389.0	77.2
0°-90°	3093.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3093.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1087	1087	1087	1087	1087	
5°	1082	1084	1079	1085	1086	103
15°	1035	1038	1040	1048	1050	292
25°	940	948	958	974	977	433
35°	813	822	842	863	869	507
45°	655	671	701	727	733	505
55°	488	510	547	576	582	438
65°	321	346	390	422	430	320
75°	163	195	245	278	286	173
85°	33	62	77	75	75	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1086.8	1086.8	1086.8	1086.8	1086.8
2.5°	1087.8	1087.8	1082.9	1087.8	1088.8
5°	1081.9	1083.9	1078.9	1084.8	1085.8
7.5°	1076.0	1076.0	1073.0	1078.9	1079.9
10°	1065.2	1066.2	1065.2	1072.1	1073.0
12.5°	1051.4	1053.4	1054.4	1061.3	1062.2
15°	1034.7	1037.7	1039.6	1048.5	1050.4
17.5°	1016.1	1019.0	1023.9	1033.7	1035.7
20°	993.5	997.4	1003.3	1016.1	1019.0
22.5°	968.9	972.8	982.6	994.4	999.3
25°	940.4	948.2	958.1	973.8	976.7
27.5°	911.9	918.8	931.5	948.2	952.2
30°	878.5	889.3	905.0	921.7	925.6
32.5°	846.1	856.9	875.5	893.2	898.1
35°	812.6	822.5	842.1	862.8	868.7
37.5°	774.3	787.1	808.7	829.3	835.2
40°	734.0	749.8	774.3	795.9	802.8
42.5°	695.7	712.4	737.0	760.6	768.4
45°	655.4	671.1	700.6	727.2	733.1
47.5°	614.2	631.8	663.3	689.8	699.6
50°	572.9	591.6	625.0	652.5	658.4
52.5°	531.6	551.3	586.6	616.1	619.1
55°	488.4	510.0	547.3	575.8	581.7
57.5°	449.1	467.7	508.0	537.5	544.4
60°	405.8	426.5	469.7	497.2	506.1
62.5°	364.6	386.2	431.4	458.9	466.8
65°	321.3	345.9	390.1	422.5	430.4
67.5°	284.0	307.6	354.7	386.2	394.0
70°	240.7	267.3	317.4	349.8	357.7
72.5°	203.4	230.9	281.0	312.5	324.3
75°	163.1	194.6	244.7	278.1	285.9
77.5°	123.8	160.2	211.3	236.8	236.8
80°	88.4	126.8	173.9	185.7	187.7
82.5°	58.0	95.3	128.7	127.7	127.7
85°	33.4	61.9	76.6	74.7	74.7
87.5°	12.8	25.5	27.5	27.5	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)