

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: P272078

Luminaire Tested: **24CZ2-45HE-UNV-L935-CD1-U**

Issue Date: 3/3/2020

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: P272078
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-UNV-L935-CD1-U
Description: 2'x4' TROFFER LED MODULE,RIBBED LENS, 90CRI
Light Source: (168) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3874.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

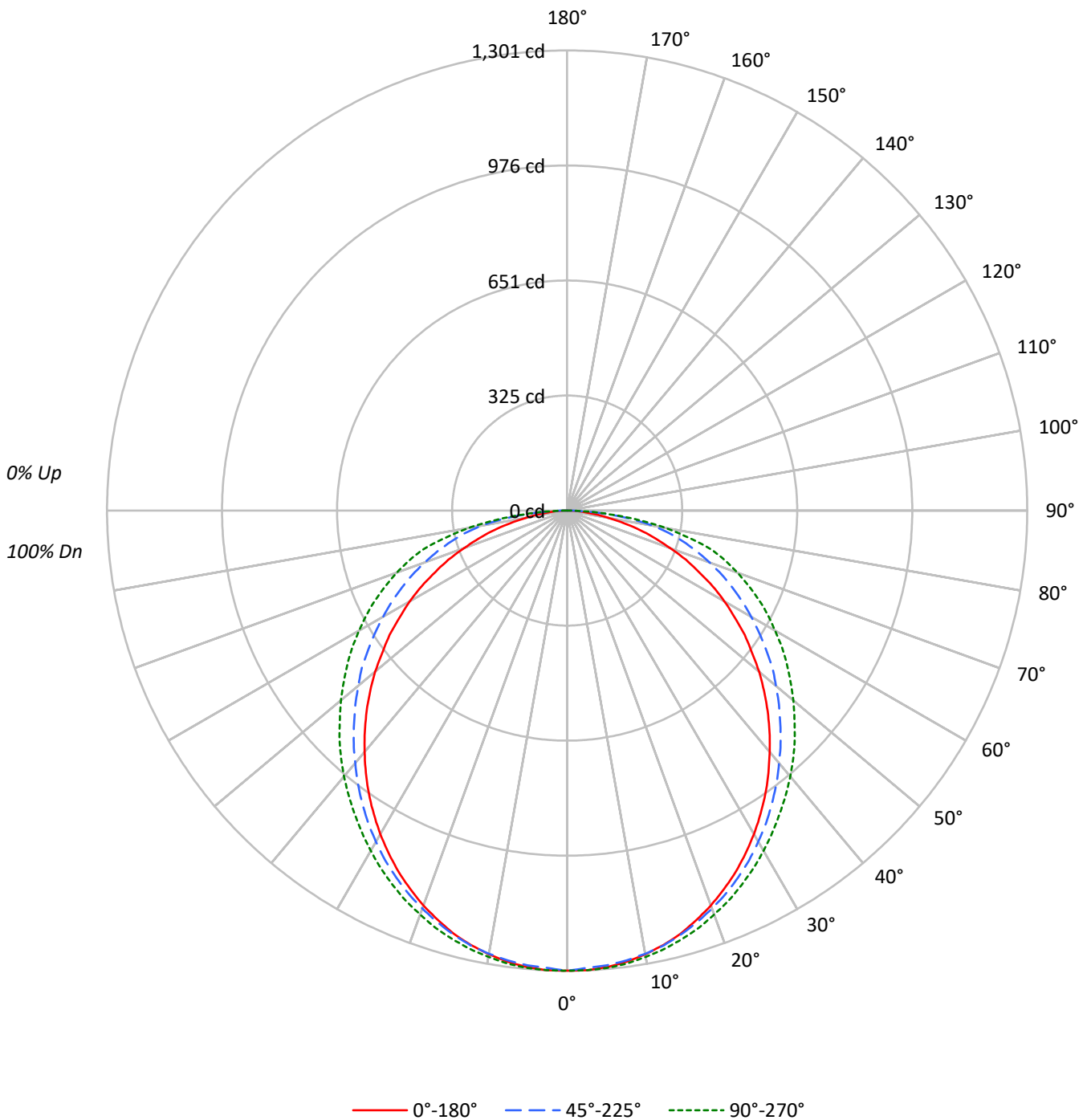
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1750	1750	1750
5°	1750	1743	1753
10°	1740	1738	1751
15°	1725	1729	1747
20°	1701	1714	1740
25°	1674	1699	1733
30°	1641	1679	1725
35°	1606	1659	1720
40°	1565	1637	1724
45°	1525	1621	1732
50°	1483	1613	1748
55°	1437	1610	1780
60°	1381	1618	1827
65°	1309	1642	1906
70°	1216	1684	2014
75°	1109	1768	2184
80°	912	1904	2184
85°	699	1757	1876



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.0	3.2
10°-20°	351.2	9.1
20°-30°	528.5	13.6
30°-40°	633.3	16.3
40°-50°	660.0	17.0
50°-60°	614.0	15.9
60°-70°	505.7	13.1
70°-80°	344.4	8.9
80°-90°	113.7	2.9
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°	1002.7	25.9
0°-40°	1636.0	42.2
0°-60°	2910.1	75.1
0°-90°	3874.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3874.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1301	1301	1301	1301	1301	
5°	1296	1296	1290	1297	1298	123
15°	1239	1240	1241	1253	1254	349
25°	1127	1133	1144	1164	1168	519
35°	978	989	1010	1037	1047	611
45°	802	818	852	895	910	618
55°	613	634	686	741	759	546
65°	411	446	516	577	599	408
75°	213	261	340	401	420	225
85°	45	88	114	122	122	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1300.7	1300.7	1300.7	1300.7	1300.7
2.5°	1300.7	1300.7	1294.2	1300.7	1300.7
5°	1295.5	1295.5	1290.3	1296.8	1298.1
7.5°	1286.5	1287.8	1282.6	1290.3	1291.6
10°	1273.5	1274.8	1272.2	1280.0	1281.3
12.5°	1258.0	1259.3	1259.3	1268.4	1269.7
15°	1238.6	1239.9	1241.2	1252.8	1254.1
17.5°	1214.1	1217.9	1220.5	1234.7	1237.3
20°	1188.2	1192.1	1197.2	1212.8	1215.3
22.5°	1158.5	1163.6	1172.7	1189.5	1193.4
25°	1127.4	1132.6	1144.2	1163.6	1167.5
27.5°	1092.5	1100.3	1114.5	1135.2	1140.4
30°	1056.3	1064.1	1080.9	1102.9	1110.6
32.5°	1017.5	1027.9	1047.3	1071.8	1079.6
35°	977.5	989.1	1009.8	1036.9	1047.3
37.5°	934.8	947.7	972.3	1002.0	1014.9
40°	890.8	906.3	932.2	967.1	981.3
42.5°	846.9	861.1	893.4	930.9	946.4
45°	801.6	818.4	852.0	894.7	910.2
47.5°	755.1	771.9	812.0	857.2	871.4
50°	708.5	725.3	770.6	818.4	835.2
52.5°	658.1	680.1	731.8	779.6	796.4
55°	612.8	633.5	686.5	740.8	758.9
57.5°	561.1	585.7	643.9	700.8	720.2
60°	513.3	539.1	601.2	659.4	678.8
62.5°	464.2	492.6	558.5	618.0	640.0
65°	411.1	446.1	515.9	576.6	598.6
67.5°	363.3	399.5	473.2	535.3	554.7
70°	309.0	353.0	428.0	490.0	512.0
72.5°	262.5	306.4	385.3	446.1	468.0
75°	213.3	261.2	340.0	400.8	420.2
77.5°	164.2	217.2	296.1	342.6	349.1
80°	117.7	173.3	245.7	272.8	281.9
82.5°	82.7	133.2	181.0	199.1	204.3
85°	45.3	87.9	113.8	121.5	121.5
87.5°	19.4	37.5	45.3	46.5	47.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)