

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: P272077

Luminaire Tested: **24CZ2-45HE-UNV-L930-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: P272077
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-L930-CD1-U
Description: 2'x4' TROFFER LED MODULE,RIBBED LENS, 90CRI
Light Source: (168) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3780.0 lumens
Efficiency: N/A
Efficacy: 107.1 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

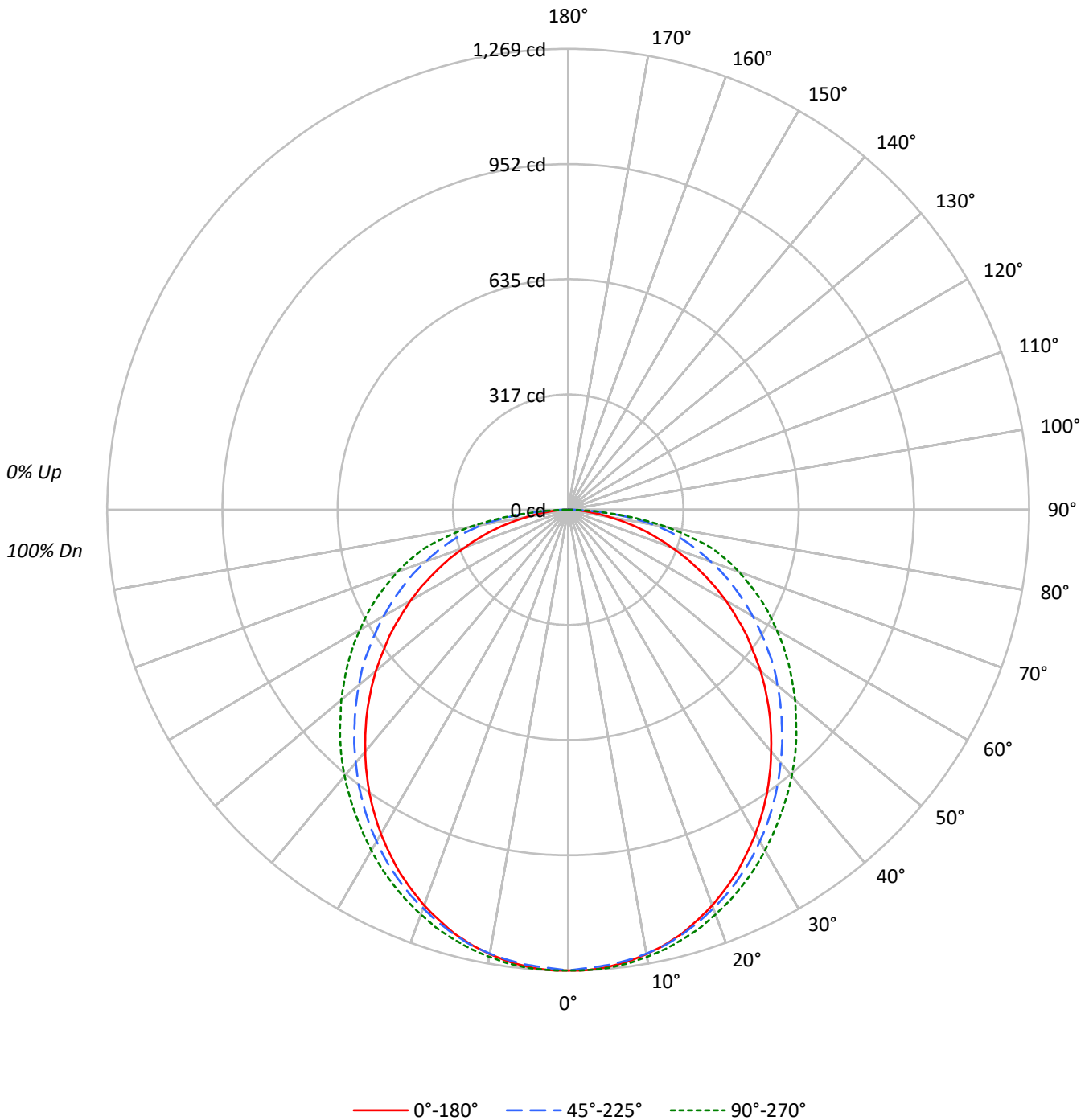
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1708	1708	1708
5°	1707	1700	1711
10°	1698	1696	1708
15°	1684	1687	1705
20°	1660	1673	1698
25°	1633	1658	1691
30°	1601	1639	1684
35°	1566	1618	1679
40°	1527	1598	1682
45°	1488	1582	1690
50°	1447	1574	1706
55°	1403	1571	1737
60°	1348	1579	1782
65°	1277	1603	1860
70°	1186	1643	1965
75°	1082	1725	2131
80°	890	1857	2131
85°	682	1714	1831



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.0	3.2
10°-20°	342.7	9.1
20°-30°	515.7	13.6
30°-40°	618.0	16.3
40°-50°	644.0	17.0
50°-60°	599.2	15.9
60°-70°	493.5	13.1
70°-80°	336.1	8.9
80°-90°	111.0	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°	978.4	25.9
0°-40°	1596.3	42.2
0°-60°	2839.5	75.1
0°-90°	3780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3780.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1269	1269	1269	1269	1269	
5°	1264	1264	1259	1265	1267	120
15°	1209	1210	1211	1222	1224	340
25°	1100	1105	1116	1135	1139	506
35°	954	965	985	1012	1022	596
45°	782	799	831	873	888	603
55°	598	618	670	723	740	533
65°	401	435	503	563	584	398
75°	208	255	332	391	410	219
85°	44	86	111	119	119	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1269.1	1269.1	1269.1	1269.1	1269.1
2.5°	1269.1	1269.1	1262.8	1269.1	1269.1
5°	1264.1	1264.1	1259.0	1265.3	1266.6
7.5°	1255.2	1256.5	1251.5	1259.0	1260.3
10°	1242.6	1243.9	1241.4	1248.9	1250.2
12.5°	1227.5	1228.8	1228.8	1237.6	1238.8
15°	1208.6	1209.8	1211.1	1222.4	1223.7
17.5°	1184.6	1188.4	1190.9	1204.8	1207.3
20°	1159.4	1163.2	1168.2	1183.3	1185.9
22.5°	1130.4	1135.4	1144.2	1160.6	1164.4
25°	1100.1	1105.1	1116.5	1135.4	1139.2
27.5°	1066.0	1073.6	1087.5	1107.6	1112.7
30°	1030.7	1038.3	1054.7	1076.1	1083.7
32.5°	992.8	1002.9	1021.9	1045.8	1053.4
35°	953.7	965.1	985.3	1011.8	1021.9
37.5°	912.1	924.7	948.7	977.7	990.3
40°	869.2	884.3	909.6	943.6	957.5
42.5°	826.3	840.2	871.7	908.3	923.5
45°	782.2	798.6	831.4	873.0	888.1
47.5°	736.7	753.1	792.3	836.4	850.3
50°	691.3	707.7	751.9	798.6	815.0
52.5°	642.1	663.6	714.0	760.7	777.1
55°	598.0	618.2	669.9	722.9	740.5
57.5°	547.5	571.5	628.3	683.8	702.7
60°	500.8	526.1	586.6	643.4	662.3
62.5°	452.9	480.7	545.0	603.0	624.5
65°	401.2	435.2	503.4	562.7	584.1
67.5°	354.5	389.8	461.7	522.3	541.2
70°	301.5	344.4	417.6	478.1	499.6
72.5°	256.1	299.0	375.9	435.2	456.7
75°	208.2	254.8	331.8	391.1	410.0
77.5°	160.2	211.9	288.9	334.3	340.6
80°	114.8	169.0	239.7	266.2	275.0
82.5°	80.7	129.9	176.6	194.3	199.3
85°	44.2	85.8	111.0	118.6	118.6
87.5°	18.9	36.6	44.2	45.4	46.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)