

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: P272153

Luminaire Tested: **24CZ2-45-S-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: P272153
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45-S-UNV-L930-CD1-U
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI
Light Source: (84) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

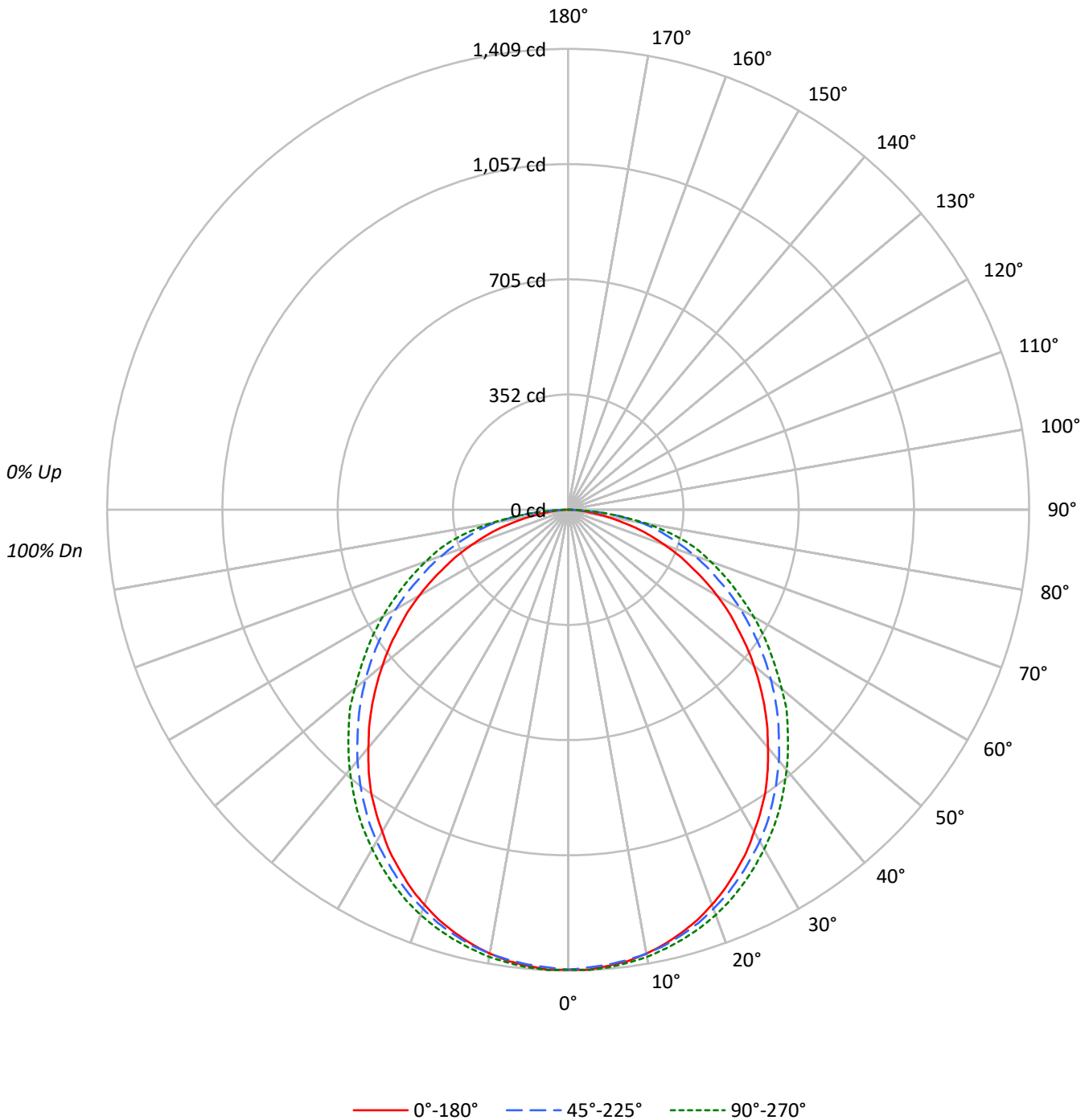
Lumens per Lamp: N/A
Luminaire Lumens: 4003.0 lumens
Efficiency: N/A
Efficacy: 93.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 42.9
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	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°	1892	1892	1892
5°	1891	1886	1898
10°	1883	1883	1897
15°	1865	1874	1893
20°	1841	1859	1888
25°	1806	1840	1876
30°	1766	1819	1861
35°	1727	1790	1846
40°	1668	1760	1825
45°	1614	1725	1805
50°	1552	1693	1783
55°	1482	1661	1766
60°	1413	1636	1762
65°	1324	1607	1773
70°	1225	1616	1821
75°	1097	1646	1923
80°	886	1744	1882
85°	667	1531	1491



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.1	3.3
10°-20°	380.4	9.5
20°-30°	571.8	14.3
30°-40°	681.2	17.0
40°-50°	697.1	17.4
50°-60°	627.6	15.7
60°-70°	492.9	12.3
70°-80°	319.9	8.0
80°-90°	98.9	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°	1085.4	27.1
0°-40°	1766.5	44.1
0°-60°	3091.3	77.2
0°-90°	4003.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1400	1402	1396	1404	1405	133
15°	1339	1343	1345	1357	1359	378
25°	1217	1227	1240	1260	1264	561
35°	1052	1064	1090	1116	1124	656
45°	848	868	907	941	948	654
55°	632	660	708	745	753	567
65°	416	448	505	547	557	414
75°	211	252	317	360	370	223
85°	43	80	99	97	97	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1406.3	1406.3	1406.3	1406.3	1406.3
2.5°	1407.6	1407.6	1401.2	1407.6	1408.8
5°	1399.9	1402.5	1396.1	1403.7	1405.0
7.5°	1392.3	1392.3	1388.5	1396.1	1397.4
10°	1378.3	1379.6	1378.3	1387.2	1388.5
12.5°	1360.5	1363.0	1364.3	1373.2	1374.5
15°	1338.9	1342.7	1345.2	1356.7	1359.2
17.5°	1314.7	1318.5	1324.9	1337.6	1340.2
20°	1285.5	1290.6	1298.2	1314.7	1318.5
22.5°	1253.7	1258.8	1271.5	1286.8	1293.1
25°	1216.8	1227.0	1239.7	1260.1	1263.9
27.5°	1180.0	1188.9	1205.4	1227.0	1232.1
30°	1136.7	1150.7	1171.1	1192.7	1197.8
32.5°	1094.8	1108.7	1132.9	1155.8	1162.2
35°	1051.5	1064.2	1089.7	1116.4	1124.0
37.5°	1001.9	1018.5	1046.4	1073.1	1080.8
40°	949.8	970.2	1001.9	1029.9	1038.8
42.5°	900.2	921.8	953.6	984.1	994.3
45°	848.1	868.4	906.6	940.9	948.5
47.5°	794.7	817.6	858.3	892.6	905.3
50°	741.3	765.4	808.7	844.3	851.9
52.5°	687.9	713.3	759.1	797.2	801.0
55°	631.9	659.9	708.2	745.1	752.7
57.5°	581.1	605.2	657.4	695.5	704.4
60°	525.1	551.8	607.8	643.4	654.8
62.5°	471.7	499.7	558.2	593.8	604.0
65°	415.8	447.6	504.8	546.7	556.9
67.5°	367.5	398.0	459.0	499.7	509.9
70°	311.5	345.8	410.7	452.7	462.8
72.5°	263.2	298.8	363.6	404.3	419.6
75°	211.1	251.8	316.6	359.8	370.0
77.5°	160.2	207.3	273.4	306.4	306.4
80°	114.4	164.0	225.1	240.3	242.9
82.5°	75.0	123.3	166.6	165.3	165.3
85°	43.2	80.1	99.2	96.6	96.6
87.5°	16.5	33.1	35.6	35.6	34.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)