

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: FAIL-SAFE

Report Number: P313965

Luminaire Tested: **24FCZ2-45-UNV-L83050-CA08-W2A-U-3000K**

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: P313965
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L83050-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3916.0 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

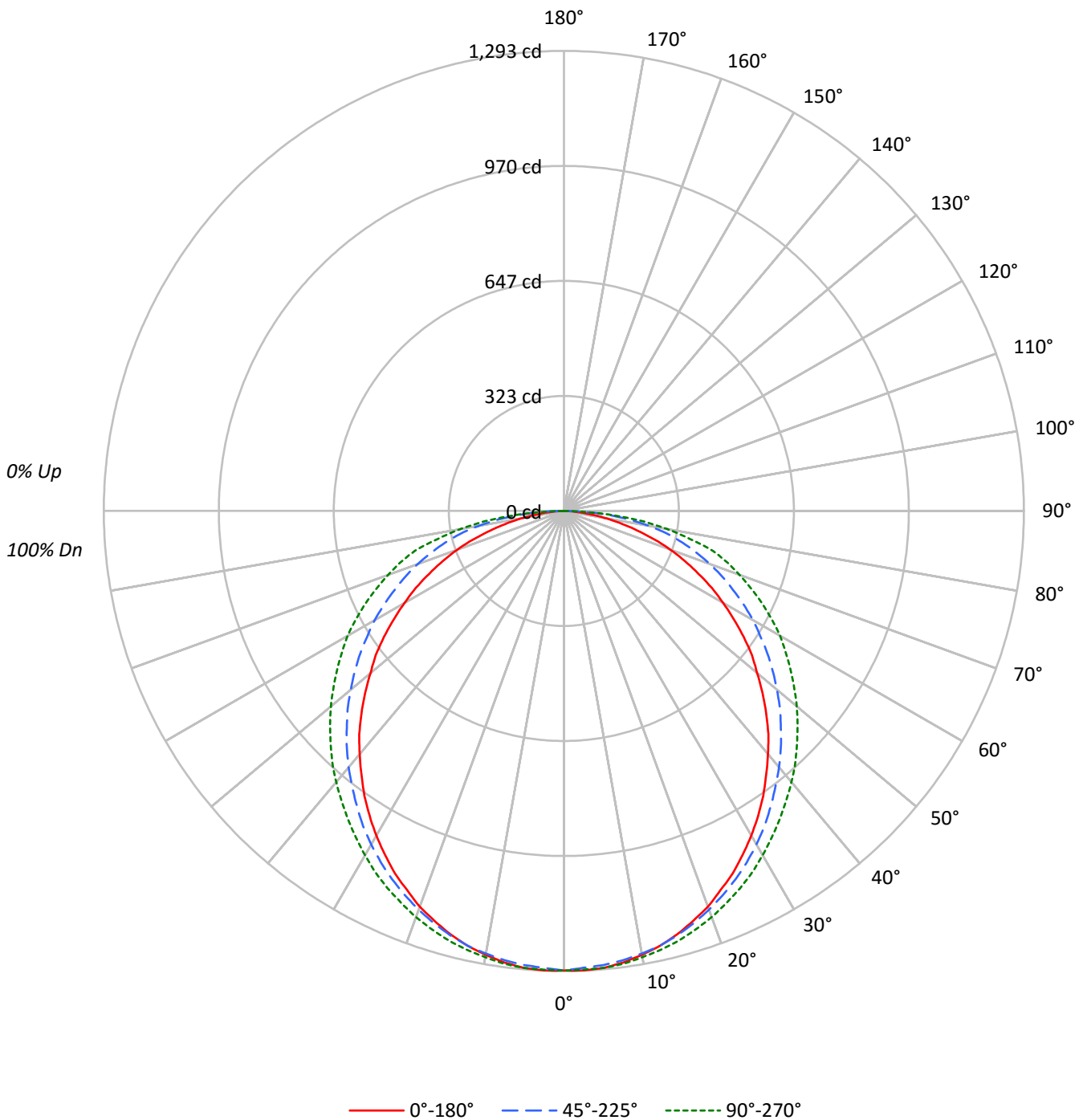
Input Watts (W): 37.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1738	1738	1738
5°	1741	1730	1741
10°	1731	1725	1740
15°	1716	1719	1741
20°	1695	1708	1739
25°	1669	1695	1738
30°	1637	1682	1736
35°	1605	1665	1737
40°	1568	1652	1748
45°	1530	1642	1763
50°	1485	1637	1789
55°	1448	1640	1826
60°	1392	1654	1888
65°	1328	1671	1956
70°	1257	1723	2065
75°	1121	1797	2256
80°	956	1903	2305
85°	682	1885	2206



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	3.1
10°-20°	349.5	8.9
20°-30°	527.9	13.5
30°-40°	636.2	16.2
40°-50°	667.9	17.1
50°-60°	624.8	16.0
60°-70°	516.0	13.2
70°-80°	351.6	9.0
80°-90°	119.9	3.1
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°	999.6	25.5
0°-40°	1635.7	41.8
0°-60°	2928.5	74.8
0°-90°	3916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1292	1292	1292	1292	1292	
5°	1289	1288	1281	1289	1289	122
15°	1232	1233	1234	1247	1250	347
25°	1124	1129	1142	1164	1171	517
35°	977	987	1013	1047	1058	611
45°	804	821	863	910	926	620
55°	617	642	699	756	778	551
65°	417	452	525	591	614	414
75°	216	265	346	411	434	230
85°	44	87	122	138	143	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1291.5	1291.5	1291.5	1291.5	1291.5
2.5°	1292.8	1291.5	1285.0	1291.5	1290.2
5°	1288.9	1287.6	1281.1	1288.9	1288.9
7.5°	1279.8	1279.8	1273.3	1282.4	1283.7
10°	1266.8	1266.8	1262.9	1273.3	1273.3
12.5°	1251.2	1251.2	1251.2	1261.6	1262.9
15°	1231.7	1233.0	1234.3	1247.3	1249.9
17.5°	1208.3	1210.9	1214.8	1230.4	1233.0
20°	1183.6	1186.2	1192.7	1210.9	1214.8
22.5°	1152.4	1158.9	1168.0	1188.8	1192.7
25°	1123.9	1129.1	1142.0	1164.1	1170.6
27.5°	1088.8	1096.6	1113.5	1136.9	1145.9
30°	1053.7	1061.5	1082.3	1109.6	1117.4
32.5°	1016.0	1027.7	1049.8	1078.4	1087.5
35°	977.0	987.4	1013.4	1047.2	1057.6
37.5°	934.2	948.5	977.0	1013.4	1026.4
40°	892.6	908.2	940.7	979.6	995.2
42.5°	851.0	866.6	903.0	947.2	962.8
45°	804.2	821.1	862.7	909.5	926.4
47.5°	757.5	778.3	823.7	873.1	891.3
50°	709.4	732.8	782.2	834.1	854.9
52.5°	666.5	688.6	740.6	796.4	815.9
55°	617.1	641.8	699.0	756.2	778.3
57.5°	566.5	593.8	654.8	717.2	739.3
60°	517.1	547.0	614.5	676.9	701.6
62.5°	469.0	498.9	569.1	634.0	658.7
65°	417.1	452.1	524.9	591.2	614.5
67.5°	367.7	405.4	482.0	547.0	570.4
70°	319.6	356.0	437.9	501.5	524.9
72.5°	267.6	309.2	391.1	457.3	482.0
75°	215.7	265.0	345.6	410.6	434.0
77.5°	167.6	218.3	298.8	352.1	363.8
80°	123.4	175.4	245.6	283.2	297.5
82.5°	79.3	131.2	187.1	214.4	226.1
85°	44.2	87.1	122.1	137.7	142.9
87.5°	18.2	37.7	49.4	55.9	55.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)