

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: P310727

Luminaire Tested: **24FCZ2-40-UNV-L82765-CA125-W2A-U-4000K**

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: P310727
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: 24FCZ2-40-UNV-L82765-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 3681.0 lumens
Efficiency: N/A
Efficacy: 111.2 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

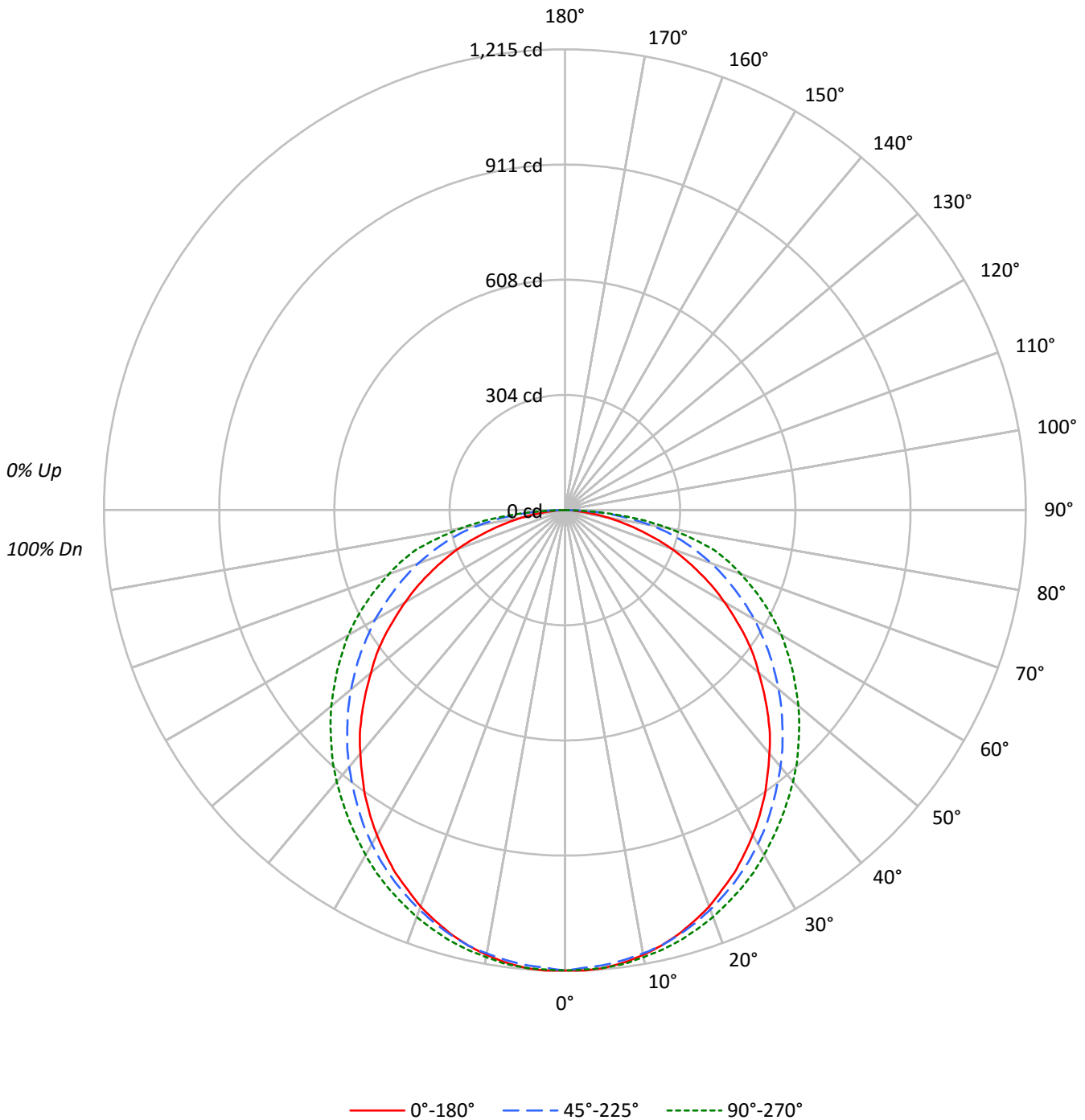
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1633	1633	1633
5°	1636	1626	1636
10°	1627	1622	1635
15°	1613	1616	1637
20°	1593	1605	1635
25°	1568	1594	1634
30°	1539	1581	1632
35°	1509	1565	1633
40°	1474	1553	1643
45°	1439	1543	1657
50°	1396	1539	1682
55°	1361	1541	1716
60°	1308	1555	1775
65°	1248	1571	1839
70°	1182	1619	1941
75°	1054	1689	2120
80°	899	1788	2167
85°	641	1772	2073



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.9	3.1
10°-20°	328.5	8.9
20°-30°	496.2	13.5
30°-40°	598.0	16.2
40°-50°	627.8	17.1
50°-60°	587.4	16.0
60°-70°	485.0	13.2
70°-80°	330.5	9.0
80°-90°	112.7	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°	939.6	25.5
0°-40°	1537.6	41.8
0°-60°	2752.7	74.8
0°-90°	3681.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3681.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1214	1214	1214	1214	1214	
5°	1212	1210	1204	1212	1212	115
15°	1158	1159	1160	1172	1175	326
25°	1056	1061	1074	1094	1100	486
35°	918	928	953	984	994	574
45°	756	772	811	855	871	583
55°	580	603	657	711	732	518
65°	392	425	493	556	578	389
75°	203	249	325	386	408	216
85°	42	82	115	130	134	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1214.0	1214.0	1214.0	1214.0	1214.0
2.5°	1215.2	1214.0	1207.9	1214.0	1212.7
5°	1211.5	1210.3	1204.2	1211.5	1211.5
7.5°	1203.0	1203.0	1196.9	1205.4	1206.6
10°	1190.8	1190.8	1187.1	1196.9	1196.9
12.5°	1176.1	1176.1	1176.1	1185.9	1187.1
15°	1157.8	1159.0	1160.2	1172.4	1174.9
17.5°	1135.8	1138.2	1141.9	1156.6	1159.0
20°	1112.6	1115.0	1121.1	1138.2	1141.9
22.5°	1083.3	1089.4	1097.9	1117.5	1121.1
25°	1056.4	1061.3	1073.5	1094.3	1100.4
27.5°	1023.4	1030.8	1046.6	1068.6	1077.2
30°	990.5	997.8	1017.3	1043.0	1050.3
32.5°	955.0	966.0	986.8	1013.7	1022.2
35°	918.4	928.2	952.6	984.4	994.1
37.5°	878.1	891.5	918.4	952.6	964.8
40°	839.0	853.7	884.2	920.9	935.5
42.5°	799.9	814.6	848.8	890.3	905.0
45°	756.0	771.9	810.9	854.9	870.8
47.5°	712.0	731.6	774.3	820.7	837.8
50°	666.8	688.8	735.2	784.1	803.6
52.5°	626.5	647.3	696.1	748.7	767.0
55°	580.1	603.3	657.1	710.8	731.6
57.5°	532.5	558.1	615.5	674.2	694.9
60°	486.1	514.2	577.7	636.3	659.5
62.5°	440.9	469.0	534.9	596.0	619.2
65°	392.0	425.0	493.4	555.7	577.7
67.5°	345.6	381.0	453.1	514.2	536.1
70°	300.4	334.6	411.6	471.4	493.4
72.5°	251.6	290.7	367.6	429.9	453.1
75°	202.7	249.1	324.9	385.9	407.9
77.5°	157.5	205.2	280.9	331.0	342.0
80°	116.0	164.9	230.8	266.2	279.7
82.5°	74.5	123.4	175.9	201.5	212.5
85°	41.5	81.8	114.8	129.5	134.3
87.5°	17.1	35.4	46.4	52.5	52.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)