

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: P312339

Luminaire Tested: **14FCZ2-25-UNV-L83050-S-CP250-W2A-U-5000K**

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: P312339
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-25-UNV-L83050-S-CP250-W2A-U-5000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 2330.0 lumens
Efficiency: N/A
Efficacy: 113.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

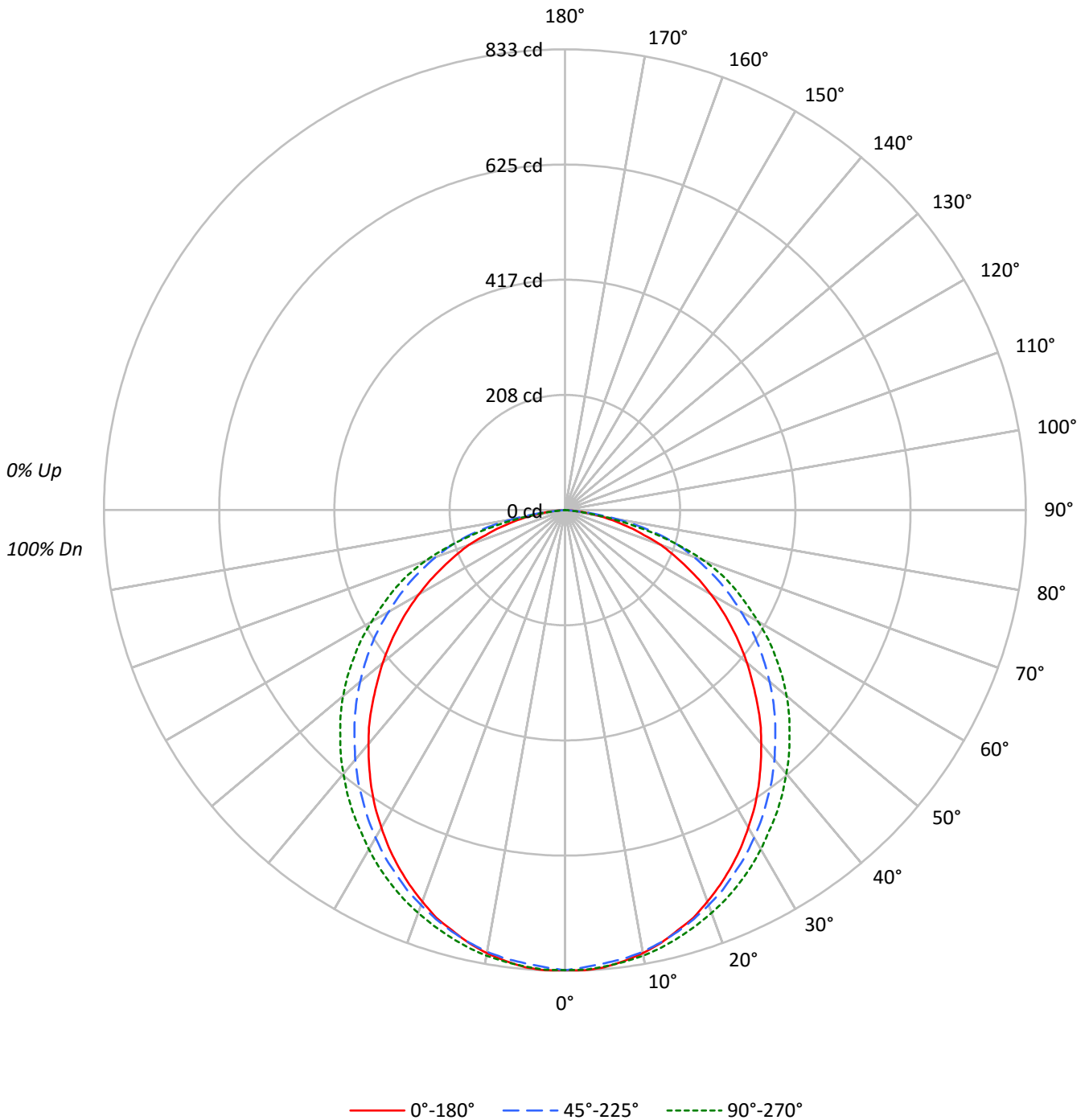
Input Watts (W): 20.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2238	2238	2238
5°	2241	2222	2237
10°	2222	2216	2235
15°	2192	2198	2227
20°	2157	2177	2220
25°	2113	2151	2212
30°	2060	2125	2201
35°	2004	2095	2193
40°	1940	2070	2187
45°	1869	2044	2185
50°	1799	2022	2191
55°	1724	2005	2184
60°	1641	1977	2170
65°	1545	1971	2170
70°	1454	1954	2109
75°	1261	1910	1802
80°	1020	1540	1199
85°	676	534	358



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.5	3.4
10°-20°	223.5	9.6
20°-30°	335.3	14.4
30°-40°	399.9	17.2
40°-50°	413.5	17.7
50°-60°	377.5	16.2
60°-70°	297.1	12.7
70°-80°	172.9	7.4
80°-90°	31.9	1.4
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°	637.3	27.4
0°-40°	1037.2	44.5
0°-60°	1828.2	78.5
0°-90°	2330.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2330.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	832	832	832	832	832	
5°	830	827	822	830	828	79
15°	787	788	789	799	799	222
25°	712	715	724	742	745	328
35°	610	618	638	662	668	381
45°	491	507	537	567	574	379
55°	367	387	427	459	466	329
65°	243	268	310	334	341	241
75°	121	150	184	180	173	129
85°	22	31	17	14	12	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	831.8	831.8	831.8	831.8	831.8
2.5°	832.9	830.6	827.2	832.9	831.8
5°	829.5	827.2	822.5	829.5	828.3
7.5°	822.5	820.2	817.9	824.8	823.7
10°	813.3	812.1	811.0	819.1	817.9
12.5°	801.7	801.7	800.6	809.8	809.8
15°	786.7	787.9	789.0	799.4	799.4
17.5°	772.9	771.7	775.2	786.7	787.9
20°	753.2	755.5	760.1	774.0	775.2
22.5°	733.6	735.9	744.0	757.8	761.3
25°	711.6	715.1	724.3	741.7	745.1
27.5°	688.5	693.1	705.9	724.3	727.8
30°	663.1	670.0	683.9	704.7	708.2
32.5°	637.7	644.6	662.0	682.7	687.4
35°	610.0	618.1	637.7	662.0	667.7
37.5°	581.1	591.5	614.6	638.8	645.8
40°	552.2	563.8	589.2	614.6	622.7
42.5°	523.3	534.9	562.6	591.5	599.6
45°	491.0	507.1	537.2	567.2	574.2
47.5°	459.8	477.1	510.6	540.7	549.9
50°	429.7	447.1	482.9	514.1	523.3
52.5°	398.6	417.0	455.2	487.5	495.6
55°	367.4	387.0	427.4	458.6	465.6
57.5°	336.2	357.0	398.6	428.6	436.7
60°	305.0	326.9	367.4	397.4	403.2
62.5°	273.8	296.9	338.5	365.1	370.8
65°	242.6	268.0	309.6	333.9	340.8
67.5°	212.6	238.0	278.4	301.5	307.3
70°	184.8	207.9	248.4	265.7	268.0
72.5°	150.2	179.1	218.3	227.6	221.8
75°	121.3	150.2	183.7	180.2	173.3
77.5°	92.4	121.3	143.2	131.7	122.5
80°	65.8	94.7	99.4	82.0	77.4
82.5°	42.7	65.8	55.5	42.7	34.7
85°	21.9	31.2	17.3	13.9	11.6
87.5°	6.9	4.6	2.3	2.3	1.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)