

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: P312893

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-4500K**

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: P312893
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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: 2175.0 lumens
Efficiency: N/A
Efficacy: 124.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

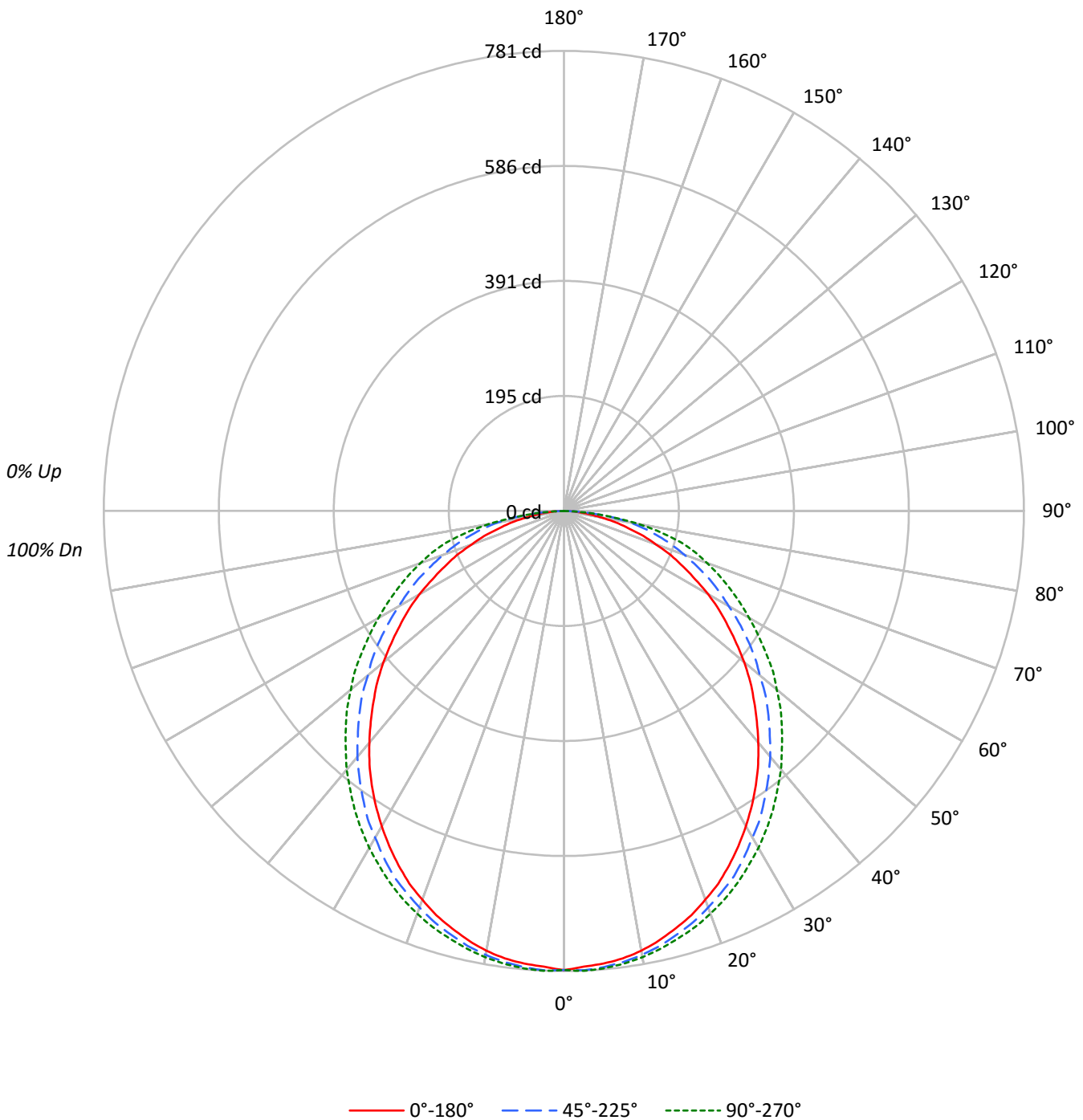
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	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	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2097	2097	2097
5°	2083	2100	2105
10°	2072	2091	2102
15°	2044	2072	2092
20°	2011	2052	2084
25°	1971	2031	2070
30°	1920	1990	2053
35°	1867	1954	2033
40°	1804	1914	2014
45°	1738	1869	1993
50°	1674	1818	1976
55°	1595	1786	1962
60°	1524	1742	1955
65°	1422	1732	1977
70°	1309	1717	2036
75°	1182	1740	2142
80°	1023	1793	2013
85°	846	1504	1504



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	3.4
10°-20°	209.8	9.6
20°-30°	313.8	14.4
30°-40°	371.7	17.1
40°-50°	378.8	17.4
50°-60°	339.5	15.6
60°-70°	265.8	12.2
70°-80°	171.4	7.9
80°-90°	50.6	2.3
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°	597.3	27.5
0°-40°	969.0	44.5
0°-60°	1687.2	77.6
0°-90°	2175.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2175.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	779	779	779	779	779	
5°	771	773	777	778	779	73
15°	734	738	744	750	751	207
25°	664	670	684	693	697	306
35°	568	575	595	613	619	355
45°	457	467	491	516	524	353
55°	340	351	381	407	418	305
65°	223	236	272	298	310	222
75°	114	131	167	196	206	122
85°	27	38	49	49	49	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	779.4	779.4	779.4	779.4	779.4
2.5°	774.3	776.3	780.4	781.4	781.4
5°	771.3	773.3	777.3	778.4	779.4
7.5°	766.2	767.2	772.3	774.3	775.3
10°	758.1	760.1	765.2	768.2	769.2
12.5°	746.9	749.9	756.0	760.1	761.1
15°	733.7	737.8	743.9	749.9	751.0
17.5°	719.5	723.6	731.7	738.8	740.8
20°	702.2	707.3	716.5	724.6	727.6
22.5°	685.0	689.1	700.2	710.4	713.4
25°	663.7	669.8	684.0	693.1	697.2
27.5°	641.4	648.5	662.7	674.8	678.9
30°	618.0	625.1	640.3	655.6	660.6
32.5°	593.7	601.8	620.0	635.3	640.3
35°	568.3	575.4	594.7	612.9	619.0
37.5°	541.9	548.0	570.3	589.6	595.7
40°	513.5	521.6	545.0	567.3	573.4
42.5°	485.1	494.2	517.6	541.9	548.0
45°	456.7	466.8	491.2	516.5	523.6
47.5°	429.3	437.4	464.8	489.1	499.3
50°	399.8	408.0	434.3	461.7	471.9
52.5°	369.4	380.6	409.0	435.4	447.5
55°	340.0	351.1	380.6	406.9	418.1
57.5°	312.6	321.7	352.1	379.5	390.7
60°	283.1	291.2	323.7	353.2	363.3
62.5°	251.7	263.8	297.3	324.7	336.9
65°	223.3	236.4	272.0	298.4	310.5
67.5°	196.9	209.0	243.6	272.0	285.2
70°	166.4	182.7	218.2	246.6	258.8
72.5°	142.1	156.3	192.8	221.2	234.4
75°	113.7	130.9	167.4	195.9	206.0
77.5°	90.3	107.6	142.1	164.4	169.5
80°	66.0	83.2	115.7	126.9	129.9
82.5°	44.7	60.9	83.2	86.3	87.3
85°	27.4	37.5	48.7	48.7	48.7
87.5°	13.2	15.2	17.3	16.2	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)