

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: P312892

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-S-CA08-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: P312892
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-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.08" 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: 2154.0 lumens
Efficiency: N/A
Efficacy: 126.0 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

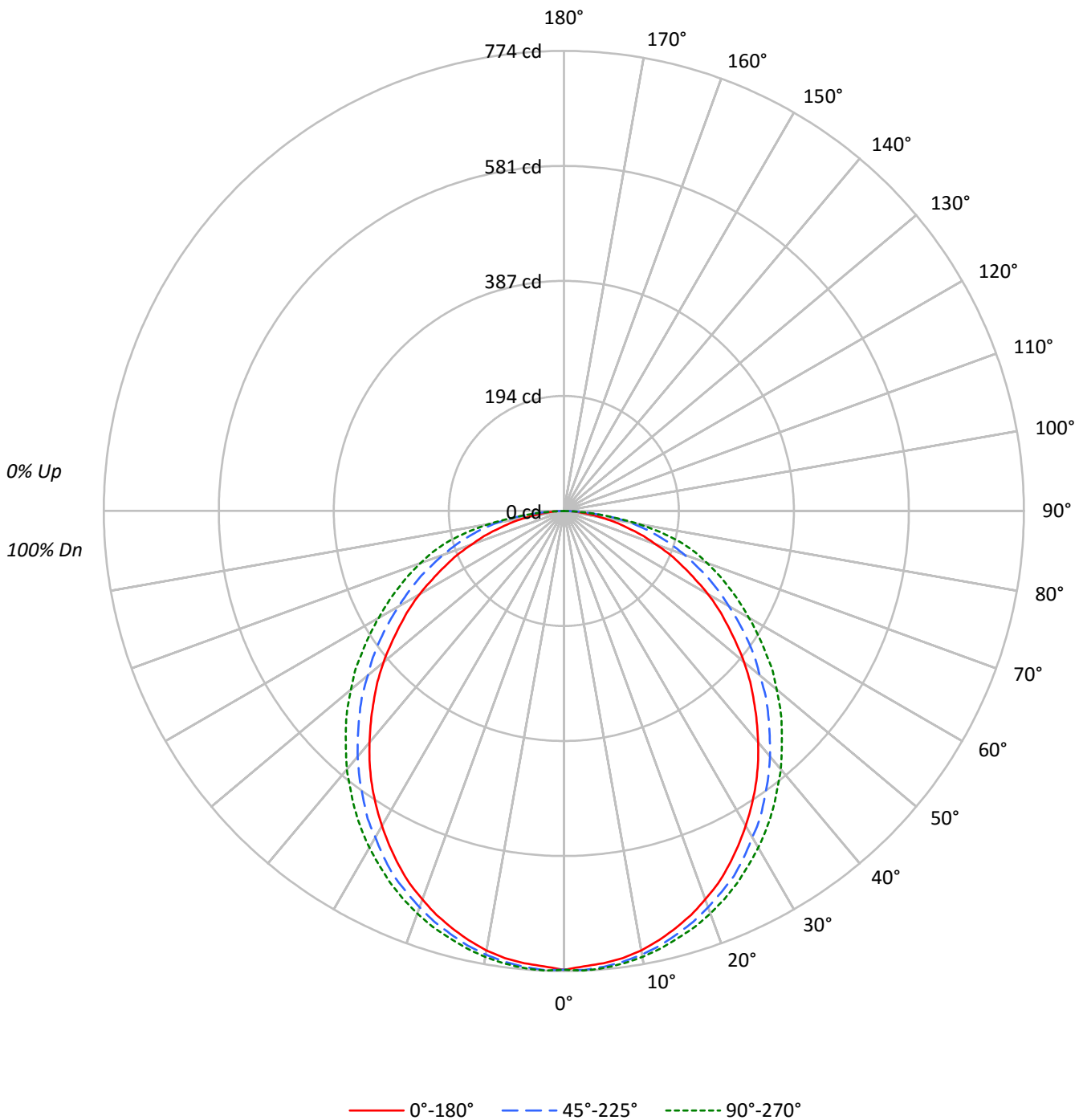
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312892

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P312892

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-4000K

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°	2077	2077	2077
5°	2063	2079	2085
10°	2051	2071	2082
15°	2024	2052	2072
20°	1992	2032	2064
25°	1952	2011	2050
30°	1902	1971	2033
35°	1849	1935	2014
40°	1786	1896	1995
45°	1721	1851	1974
50°	1658	1801	1956
55°	1580	1768	1943
60°	1509	1725	1936
65°	1408	1715	1958
70°	1297	1700	2017
75°	1171	1724	2121
80°	1012	1776	1993
85°	837	1488	1488



TEST NUMBER: P312892

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.0	3.4
10°-20°	207.7	9.6
20°-30°	310.8	14.4
30°-40°	368.1	17.1
40°-50°	375.1	17.4
50°-60°	336.2	15.6
60°-70°	263.2	12.2
70°-80°	169.7	7.9
80°-90°	50.1	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°	591.5	27.5
0°-40°	959.6	44.5
0°-60°	1670.9	77.6
0°-90°	2154.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2154.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	764	766	770	771	772	73
15°	727	731	737	743	744	205
25°	657	663	677	686	690	303
35°	563	570	589	607	613	352
45°	452	462	486	512	519	349
55°	337	348	377	403	414	302
65°	221	234	269	296	308	220
75°	113	130	166	194	204	121
85°	27	37	48	48	48	32
90°	0	0	0	0	0	



TEST NUMBER: P312892

CATALOG NUMBER: 22FCZ2-20HE-UNV-L83050-S-CA08-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	771.8	771.8	771.8	771.8	771.8
2.5°	766.8	768.8	772.9	773.9	773.9
5°	763.8	765.8	769.8	770.8	771.8
7.5°	758.8	759.8	764.8	766.8	767.8
10°	750.7	752.8	757.8	760.8	761.8
12.5°	739.7	742.7	748.7	752.8	753.8
15°	726.6	730.6	736.7	742.7	743.7
17.5°	712.5	716.6	724.6	731.6	733.7
20°	695.5	700.5	709.5	717.6	720.6
22.5°	678.4	682.4	693.5	703.5	706.5
25°	657.3	663.3	677.4	686.4	690.4
27.5°	635.2	642.2	656.3	668.3	672.3
30°	612.0	619.1	634.2	649.2	654.3
32.5°	587.9	596.0	614.1	629.1	634.2
35°	562.8	569.8	588.9	607.0	613.1
37.5°	536.7	542.7	564.8	583.9	589.9
40°	508.5	516.6	539.7	561.8	567.8
42.5°	480.4	489.4	512.6	536.7	542.7
45°	452.3	462.3	486.4	511.5	518.6
47.5°	425.1	433.2	460.3	484.4	494.5
50°	396.0	404.0	430.1	457.3	467.3
52.5°	365.8	376.9	405.0	431.1	443.2
55°	336.7	347.7	376.9	403.0	414.1
57.5°	309.5	318.6	348.7	375.9	386.9
60°	280.4	288.4	320.6	349.7	359.8
62.5°	249.2	261.3	294.5	321.6	333.7
65°	221.1	234.2	269.3	295.5	307.5
67.5°	195.0	207.0	241.2	269.3	282.4
70°	164.8	180.9	216.1	244.2	256.3
72.5°	140.7	154.8	191.0	219.1	232.2
75°	112.6	129.6	165.8	194.0	204.0
77.5°	89.4	106.5	140.7	162.8	167.8
80°	65.3	82.4	114.6	125.6	128.6
82.5°	44.2	60.3	82.4	85.4	86.4
85°	27.1	37.2	48.2	48.2	48.2
87.5°	13.1	15.1	17.1	16.1	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)