

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: P312810

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-CP250-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: P312810
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L83050-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB 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: 2251.0 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

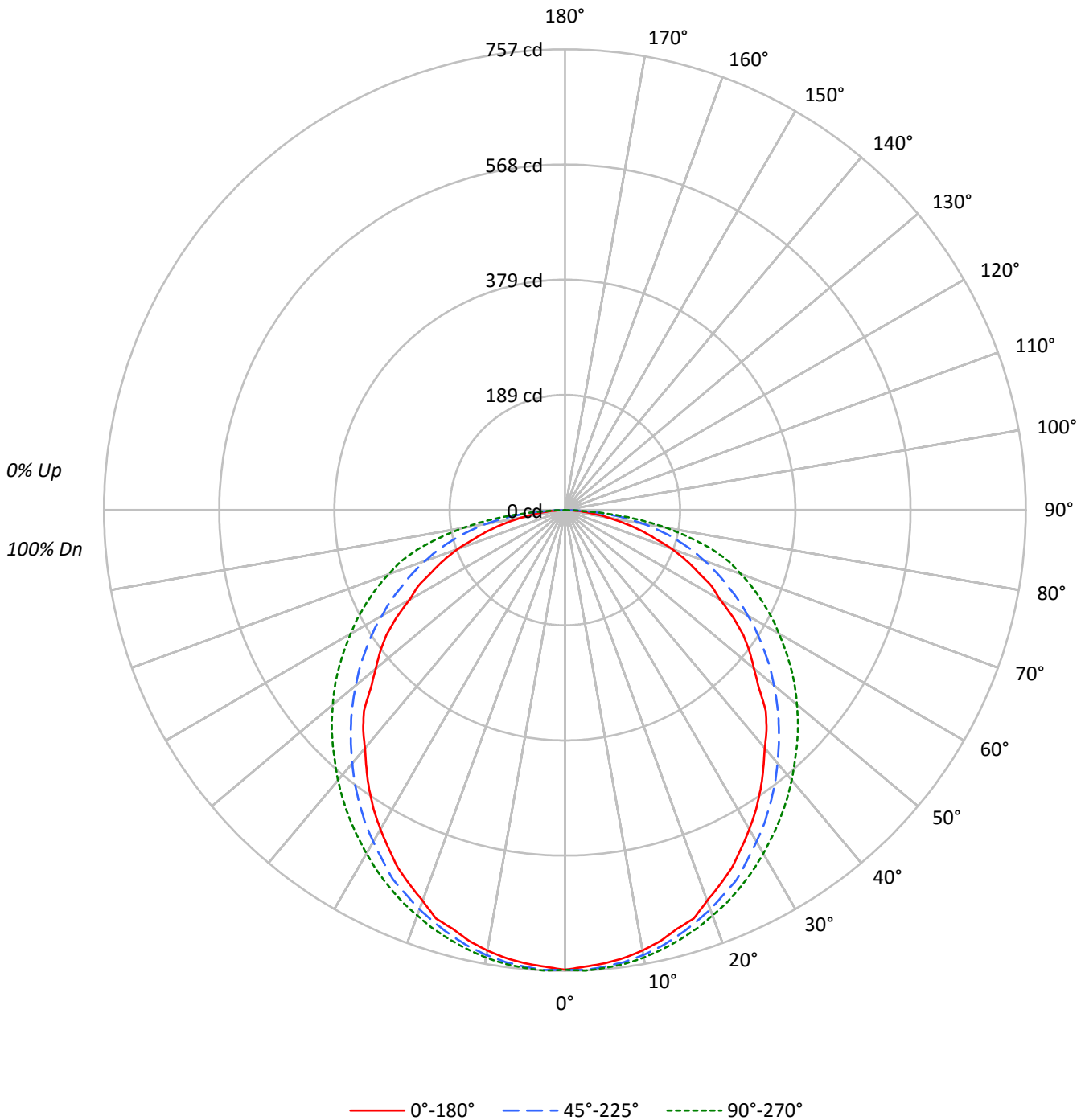
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312810

CATALOG NUMBER: 22FCZ2-29HE-UNV-L83050-CP250-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P312810

CATALOG NUMBER: 22FCZ2-29HE-UNV-L83050-CP250-W2A-U-3000K

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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2032	2032	2032
5°	2020	2034	2040
10°	2008	2028	2040
15°	1984	2014	2035
20°	1956	1999	2030
25°	1926	1986	2028
30°	1881	1955	2025
35°	1840	1932	2028
40°	1794	1907	2036
45°	1775	1890	2054
50°	1696	1876	2084
55°	1678	1870	2128
60°	1583	1867	2186
65°	1536	1880	2285
70°	1475	1924	2424
75°	1344	1983	2610
80°	1151	2053	2638
85°	932	1964	2263



TEST NUMBER: P312810

CATALOG NUMBER: 22FCZ2-29HE-UNV-L83050-CP250-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.5	3.2
10°-20°	203.9	9.1
20°-30°	306.8	13.6
30°-40°	368.2	16.4
40°-50°	384.9	17.1
50°-60°	358.7	15.9
60°-70°	294.2	13.1
70°-80°	198.2	8.8
80°-90°	64.6	2.9
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°	582.2	25.9
0°-40°	950.4	42.2
0°-60°	1694.0	75.3
0°-90°	2251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2251.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	755	755	755	755	755	
5°	748	750	753	754	755	71
15°	712	716	723	729	730	201
25°	649	653	669	679	683	298
35°	560	568	588	609	617	350
45°	466	470	497	527	540	356
55°	358	364	399	436	454	317
65°	241	252	295	338	359	240
75°	129	143	191	234	251	136
85°	30	43	64	74	73	36
90°	0	0	0	0	0	



TEST NUMBER: P312810

CATALOG NUMBER: 22FCZ2-29HE-UNV-L83050-CP250-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	755.2	755.2	755.2	755.2	755.2
2.5°	750.9	753.1	756.3	757.4	757.4
5°	747.7	749.8	753.1	754.2	755.2
7.5°	742.3	744.5	748.8	750.9	752.0
10°	734.8	736.9	742.3	745.5	746.6
12.5°	725.1	727.2	733.7	738.0	739.1
15°	712.1	716.4	722.9	729.4	730.5
17.5°	703.5	702.4	711.1	718.6	720.8
20°	683.0	688.4	698.1	706.7	708.9
22.5°	665.8	670.1	683.0	692.7	697.1
25°	648.6	652.9	669.0	678.7	683.0
27.5°	627.0	633.5	648.6	662.6	668.0
30°	605.5	611.9	629.2	645.3	651.8
32.5°	583.9	591.5	609.8	627.0	634.6
35°	560.2	567.8	588.2	608.7	617.3
37.5°	535.4	545.1	566.7	589.3	599.0
40°	510.7	520.4	543.0	568.8	579.6
42.5°	490.2	494.5	520.4	548.4	559.2
45°	466.5	469.7	496.7	526.8	539.8
47.5°	432.0	443.9	473.0	506.4	519.3
50°	405.1	418.0	448.2	483.7	497.7
52.5°	382.5	391.1	424.5	460.0	476.2
55°	357.7	364.1	398.6	436.3	453.6
57.5°	327.5	339.4	373.8	412.6	429.9
60°	294.1	309.2	346.9	388.9	406.2
62.5°	272.6	281.2	322.1	364.1	383.5
65°	241.3	252.1	295.2	338.3	358.8
67.5°	215.5	226.2	270.4	313.5	334.0
70°	187.5	198.2	244.6	287.7	308.1
72.5°	155.1	170.2	218.7	261.8	283.3
75°	129.3	143.3	190.7	233.8	251.0
77.5°	100.2	118.5	162.7	198.2	211.2
80°	74.3	92.7	132.5	158.4	170.2
82.5°	50.6	69.0	99.1	118.5	125.0
85°	30.2	43.1	63.6	74.3	73.3
87.5°	14.0	18.3	25.9	25.9	24.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)