

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: P312755

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-CP187-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: P312755
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: 22FCZ2-20HE-UNV-L83050-CP187-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 1720.0 lumens
Efficiency: N/A
Efficacy: 103.0 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

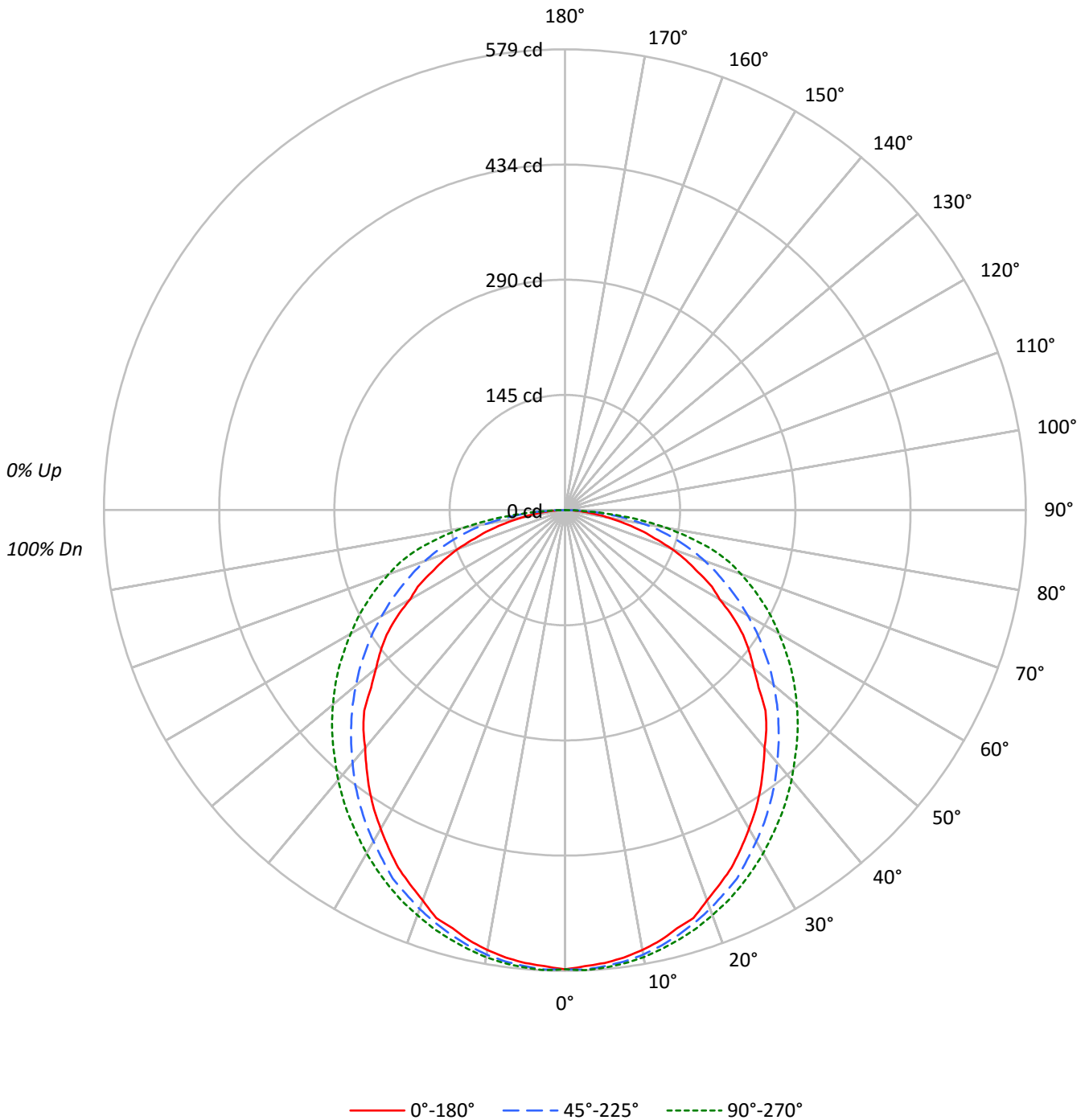
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-20HE-UNV-L83050-CP187-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°	1553	1553	1553
5°	1543	1554	1559
10°	1534	1550	1559
15°	1516	1539	1555
20°	1495	1527	1551
25°	1472	1518	1550
30°	1437	1494	1547
35°	1406	1477	1550
40°	1371	1457	1556
45°	1357	1444	1569
50°	1296	1434	1592
55°	1282	1429	1626
60°	1209	1427	1671
65°	1174	1436	1745
70°	1127	1471	1852
75°	1027	1515	1994
80°	880	1570	2016
85°	713	1501	1729



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	3.2
10°-20°	155.8	9.1
20°-30°	234.4	13.6
30°-40°	281.4	16.4
40°-50°	294.1	17.1
50°-60°	274.1	15.9
60°-70°	224.8	13.1
70°-80°	151.5	8.8
80°-90°	49.3	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°	444.8	25.9
0°-40°	726.2	42.2
0°-60°	1294.4	75.3
0°-90°	1720.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1720.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	577	577	577	577	577	
5°	571	573	575	576	577	54
15°	544	547	552	557	558	154
25°	496	499	511	519	522	228
35°	428	434	450	465	472	268
45°	356	359	380	403	412	272
55°	273	278	305	333	347	242
65°	184	193	226	258	274	183
75°	99	110	146	179	192	104
85°	23	33	49	57	56	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	577.1	577.1	577.1	577.1	577.1
2.5°	573.8	575.4	577.9	578.7	578.7
5°	571.3	573.0	575.4	576.3	577.1
7.5°	567.2	568.8	572.1	573.8	574.6
10°	561.4	563.1	567.2	569.7	570.5
12.5°	554.0	555.7	560.6	563.9	564.7
15°	544.1	547.4	552.4	557.3	558.1
17.5°	537.6	536.7	543.3	549.1	550.7
20°	521.9	526.0	533.4	540.0	541.7
22.5°	508.7	512.0	521.9	529.3	532.6
25°	495.6	498.9	511.2	518.6	521.9
27.5°	479.1	484.1	495.6	506.3	510.4
30°	462.6	467.6	480.8	493.1	498.0
32.5°	446.2	451.9	465.9	479.1	484.9
35°	428.1	433.8	449.5	465.1	471.7
37.5°	409.1	416.5	433.0	450.3	457.7
40°	390.2	397.6	414.9	434.7	442.9
42.5°	374.6	377.9	397.6	419.0	427.2
45°	356.5	358.9	379.5	402.6	412.4
47.5°	330.1	339.2	361.4	386.9	396.8
50°	309.5	319.4	342.5	369.6	380.3
52.5°	292.2	298.8	324.3	351.5	363.9
55°	273.3	278.2	304.6	333.4	346.6
57.5°	250.3	259.3	285.7	315.3	328.5
60°	224.7	236.3	265.1	297.2	310.4
62.5°	208.3	214.9	246.1	278.2	293.1
65°	184.4	192.6	225.6	258.5	274.1
67.5°	164.6	172.9	206.6	239.6	255.2
70°	143.2	151.5	186.9	219.8	235.4
72.5°	118.5	130.1	167.1	200.0	216.5
75°	98.8	109.5	145.7	178.6	191.8
77.5°	76.6	90.6	124.3	151.5	161.4
80°	56.8	70.8	101.3	121.0	130.1
82.5°	38.7	52.7	75.7	90.6	95.5
85°	23.1	32.9	48.6	56.8	56.0
87.5°	10.7	14.0	19.8	19.8	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)