

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: P312605

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-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: P312605
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP187-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 1151.0 lumens
Efficiency: N/A
Efficacy: 68.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

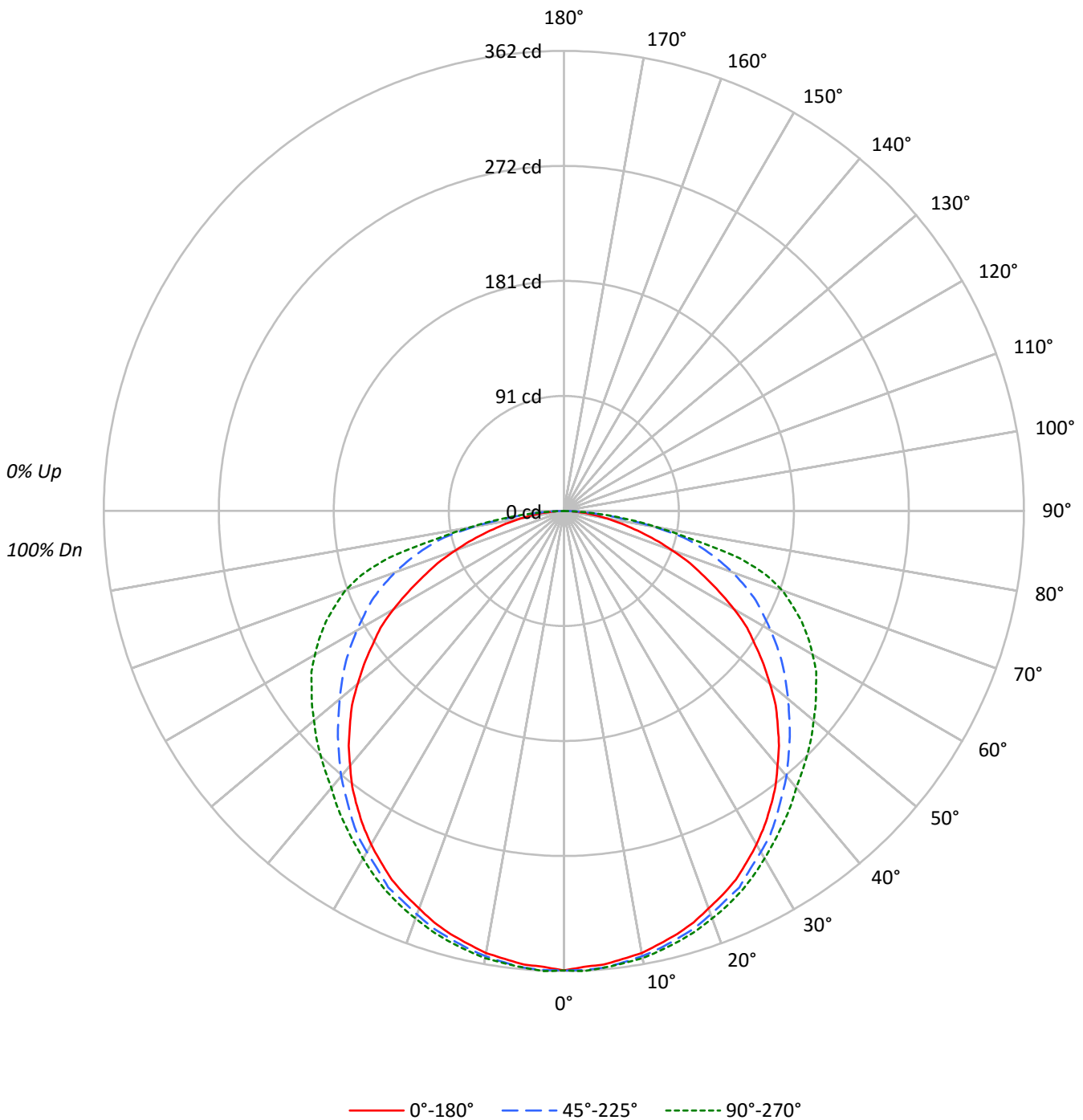
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	973	973	973
5°	968	974	974
10°	965	972	976
15°	960	969	976
20°	953	967	977
25°	950	970	980
30°	942	963	981
35°	932	960	987
40°	919	958	999
45°	905	957	1031
50°	886	964	1074
55°	862	985	1136
60°	834	1012	1217
65°	776	1062	1316
70°	713	1113	1439
75°	625	1171	1488
80°	538	1116	1168
85°	469	809	889



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.2	3.0
10°-20°	98.2	8.5
20°-30°	149.8	13.0
30°-40°	182.9	15.9
40°-50°	195.6	17.0
50°-60°	188.8	16.4
60°-70°	162.5	14.1
70°-80°	110.0	9.6
80°-90°	29.0	2.5
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°	282.2	24.5
0°-40°	465.1	40.4
0°-60°	849.5	73.8
0°-90°	1151.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1151.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	362	362	362	362	362	
5°	358	359	361	361	361	34
15°	345	346	348	350	350	97
25°	320	322	327	328	330	147
35°	284	286	292	298	301	177
45°	238	242	252	264	271	184
55°	184	190	210	231	242	165
65°	122	134	167	193	207	121
75°	60	80	113	136	143	65
85°	15	21	26	27	29	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	361.5	361.5	361.5	361.5	361.5
2.5°	359.0	359.9	361.5	361.5	362.4
5°	358.2	359.0	360.7	360.7	360.7
7.5°	355.6	356.5	358.2	359.0	359.0
10°	353.1	353.9	355.6	356.5	357.3
12.5°	348.8	349.7	352.2	353.9	353.9
15°	344.6	345.5	348.0	349.7	350.5
17.5°	339.5	341.2	343.8	345.5	346.3
20°	332.8	334.5	337.8	340.4	341.2
22.5°	326.8	328.5	331.9	334.5	336.1
25°	320.1	321.8	326.8	328.5	330.2
27.5°	311.6	313.3	317.5	320.9	323.4
30°	303.1	304.8	309.9	314.1	315.8
32.5°	293.8	296.4	302.3	305.7	308.2
35°	283.7	286.2	292.1	298.0	300.6
37.5°	273.5	276.0	282.0	289.6	293.0
40°	261.6	265.0	272.6	282.8	284.5
42.5°	250.6	254.9	261.6	273.5	277.7
45°	237.9	242.2	251.5	264.2	271.0
47.5°	226.1	230.3	240.5	255.7	264.2
50°	211.7	217.6	230.3	248.1	256.6
52.5°	198.1	203.2	220.1	239.6	249.8
55°	183.7	189.7	210.0	231.2	242.2
57.5°	171.0	176.1	199.0	222.7	235.4
60°	154.9	161.7	188.0	213.4	226.1
62.5°	138.0	148.2	177.0	203.2	216.8
65°	121.9	133.8	166.8	193.1	206.6
67.5°	107.5	120.2	154.1	182.0	194.7
70°	90.6	106.7	141.4	168.5	182.9
72.5°	75.4	93.1	127.0	154.1	166.8
75°	60.1	79.6	112.6	135.5	143.1
77.5°	46.6	65.2	96.5	103.3	104.1
80°	34.7	51.6	72.0	72.8	75.4
82.5°	23.7	36.4	46.6	50.8	51.6
85°	15.2	21.2	26.2	27.1	28.8
87.5°	6.8	7.6	9.3	8.5	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)