

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: P312590

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-CA08-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: P312590
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-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 1231.0 lumens
Efficiency: N/A
Efficacy: 73.7 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

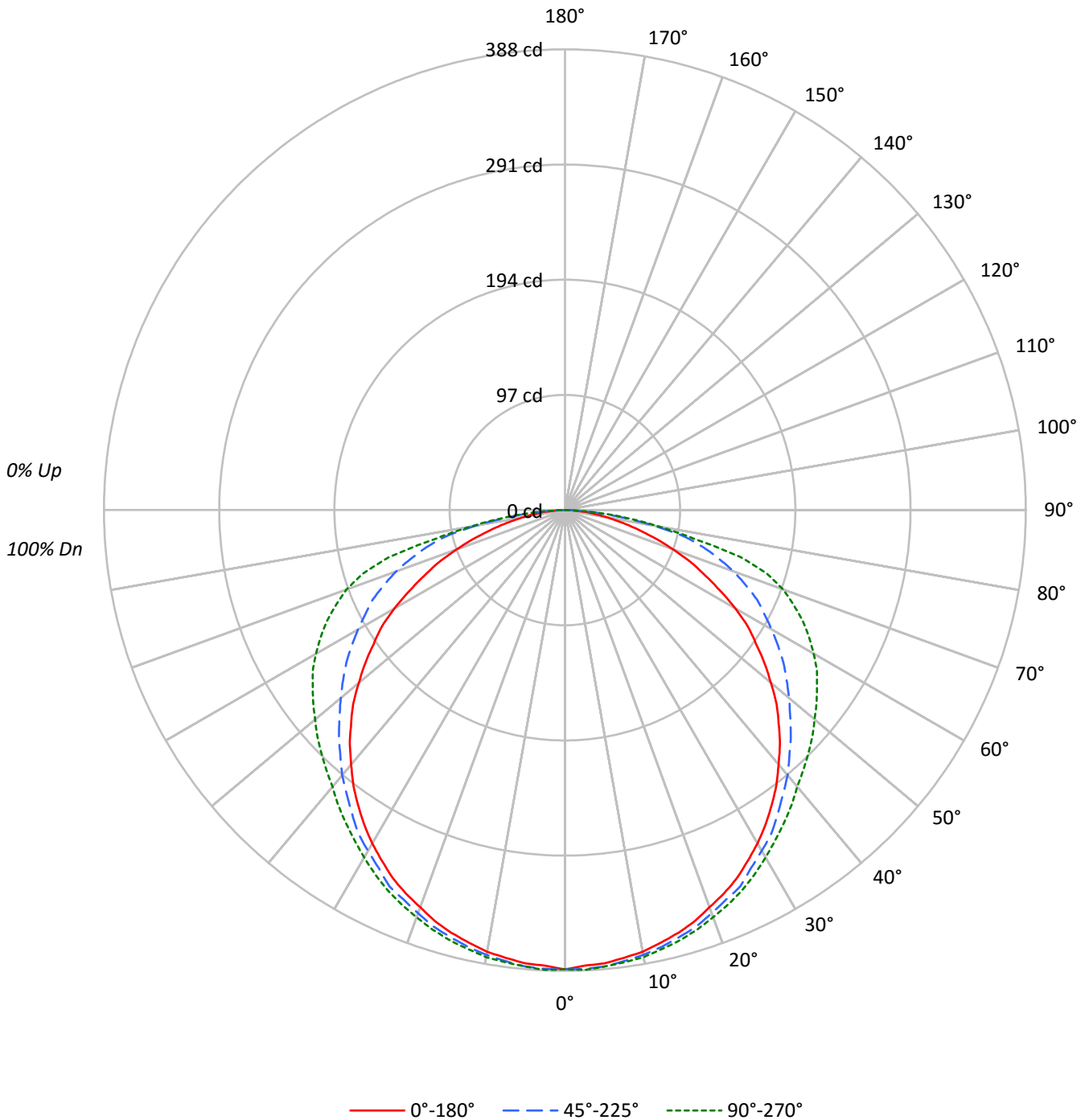
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1041	1041	1041
5°	1035	1042	1042
10°	1032	1039	1044
15°	1027	1037	1044
20°	1019	1035	1045
25°	1016	1038	1049
30°	1007	1030	1050
35°	997	1026	1056
40°	983	1024	1069
45°	969	1024	1103
50°	948	1031	1149
55°	922	1054	1215
60°	892	1082	1301
65°	830	1136	1407
70°	762	1190	1539
75°	669	1252	1591
80°	575	1193	1249
85°	503	868	951



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.6	3.0
10°-20°	105.0	8.5
20°-30°	160.2	13.0
30°-40°	195.6	15.9
40°-50°	209.2	17.0
50°-60°	201.9	16.4
60°-70°	173.8	14.1
70°-80°	117.6	9.6
80°-90°	31.0	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°	301.8	24.5
0°-40°	497.5	40.4
0°-60°	908.6	73.8
0°-90°	1231.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1231.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	387	387	387	387	387	
5°	383	384	386	386	386	36
15°	369	370	372	374	375	104
25°	342	344	350	351	353	158
35°	303	306	312	319	322	190
45°	254	259	269	282	290	196
55°	196	203	225	247	259	176
65°	130	143	178	206	221	130
75°	64	85	120	145	153	69
85°	16	23	28	29	31	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	386.7	386.7	386.7	386.7	386.7
2.5°	384.0	384.9	386.7	386.7	387.6
5°	383.1	384.0	385.8	385.8	385.8
7.5°	380.3	381.2	383.1	384.0	384.0
10°	377.6	378.5	380.3	381.2	382.2
12.5°	373.1	374.0	376.7	378.5	378.5
15°	368.6	369.5	372.2	374.0	374.9
17.5°	363.1	364.9	367.7	369.5	370.4
20°	355.9	357.7	361.3	364.0	364.9
22.5°	349.6	351.4	355.0	357.7	359.5
25°	342.3	344.1	349.6	351.4	353.2
27.5°	333.2	335.1	339.6	343.2	345.9
30°	324.2	326.0	331.4	336.0	337.8
32.5°	314.2	316.9	323.3	326.9	329.6
35°	303.4	306.1	312.4	318.8	321.5
37.5°	292.5	295.2	301.6	309.7	313.3
40°	279.8	283.4	291.6	302.5	304.3
42.5°	268.0	272.6	279.8	292.5	297.0
45°	254.5	259.0	269.0	282.5	289.8
47.5°	241.8	246.3	257.2	273.5	282.5
50°	226.4	232.7	246.3	265.3	274.4
52.5°	211.9	217.3	235.4	256.3	267.1
55°	196.5	202.8	224.6	247.2	259.0
57.5°	182.9	188.4	212.8	238.2	251.7
60°	165.7	173.0	201.0	228.2	241.8
62.5°	147.6	158.5	189.3	217.3	231.8
65°	130.4	143.1	178.4	206.5	221.0
67.5°	115.0	128.6	164.8	194.7	208.3
70°	96.9	114.1	151.2	180.2	195.6
72.5°	80.6	99.6	135.8	164.8	178.4
75°	64.3	85.1	120.4	144.9	153.0
77.5°	49.8	69.7	103.2	110.5	111.4
80°	37.1	55.2	77.0	77.9	80.6
82.5°	25.4	38.9	49.8	54.3	55.2
85°	16.3	22.6	28.1	29.0	30.8
87.5°	7.2	8.2	10.0	9.1	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)