

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: P308363

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-RDP-CP187-W2A-U-5500K**

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: P308363
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-L82765-RDP-CP187-W2A-U-5500K
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: 1267.0 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

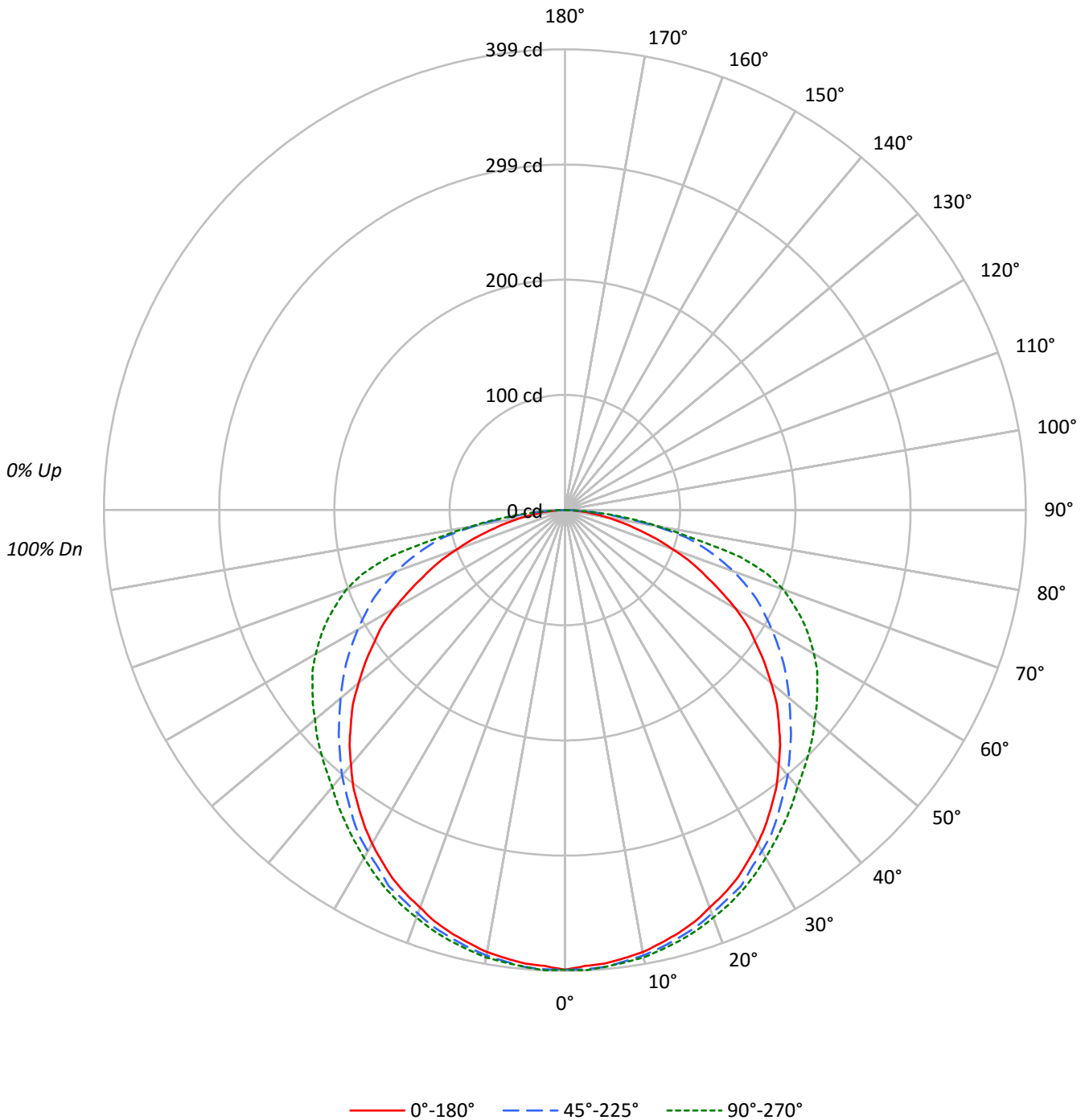
Input Watts (W): 17.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1071	1071	1071
5°	1065	1073	1073
10°	1062	1070	1075
15°	1057	1067	1075
20°	1049	1065	1076
25°	1046	1068	1079
30°	1037	1060	1080
35°	1026	1056	1087
40°	1012	1054	1100
45°	997	1053	1135
50°	975	1061	1182
55°	949	1084	1251
60°	918	1114	1340
65°	855	1169	1448
70°	784	1225	1584
75°	688	1289	1638
80°	592	1227	1286
85°	519	892	979



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.6	3.0
10°-20°	108.1	8.5
20°-30°	164.9	13.0
30°-40°	201.4	15.9
40°-50°	215.3	17.0
50°-60°	207.8	16.4
60°-70°	178.9	14.1
70°-80°	121.0	9.6
80°-90°	31.9	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°	310.7	24.5
0°-40°	512.0	40.4
0°-60°	935.1	73.8
0°-90°	1267.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1267.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	398	398	398	398	398	
5°	394	395	397	397	397	37
15°	379	380	383	385	386	107
25°	352	354	360	362	364	162
35°	312	315	322	328	331	195
45°	262	267	277	291	298	202
55°	202	209	231	254	267	181
65°	134	147	184	212	227	133
75°	66	88	124	149	158	71
85°	17	23	29	30	32	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	398.0	398.0	398.0	398.0	398.0
2.5°	395.2	396.1	398.0	398.0	398.9
5°	394.3	395.2	397.1	397.1	397.1
7.5°	391.5	392.4	394.3	395.2	395.2
10°	388.7	389.6	391.5	392.4	393.3
12.5°	384.0	384.9	387.7	389.6	389.6
15°	379.3	380.3	383.1	384.9	385.9
17.5°	373.8	375.6	378.4	380.3	381.2
20°	366.3	368.2	371.9	374.7	375.6
22.5°	359.8	361.6	365.4	368.2	370.0
25°	352.3	354.2	359.8	361.6	363.5
27.5°	343.0	344.9	349.5	353.2	356.0
30°	333.7	335.5	341.1	345.8	347.7
32.5°	323.4	326.2	332.7	336.5	339.3
35°	312.2	315.0	321.6	328.1	330.9
37.5°	301.1	303.8	310.4	318.8	322.5
40°	288.0	291.7	300.1	311.3	313.2
42.5°	275.9	280.5	288.0	301.1	305.7
45°	261.9	266.6	276.8	290.8	298.3
47.5°	248.9	253.5	264.7	281.5	290.8
50°	233.0	239.5	253.5	273.1	282.4
52.5°	218.1	223.7	242.3	263.8	275.0
55°	202.3	208.8	231.1	254.5	266.6
57.5°	188.3	193.9	219.0	245.1	259.1
60°	170.6	178.0	206.9	234.9	248.9
62.5°	151.9	163.1	194.8	223.7	238.6
65°	134.2	147.3	183.6	212.5	227.4
67.5°	118.4	132.4	169.6	200.4	214.4
70°	99.7	117.4	155.7	185.5	201.3
72.5°	83.0	102.5	139.8	169.6	183.6
75°	66.2	87.6	124.0	149.1	157.5
77.5°	51.3	71.8	106.3	113.7	114.6
80°	38.2	56.9	79.2	80.2	83.0
82.5°	26.1	40.1	51.3	55.9	56.9
85°	16.8	23.3	28.9	29.8	31.7
87.5°	7.5	8.4	10.3	9.3	9.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)