

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: P312609

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-CP187-W2A-U-5000K**

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: P312609
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-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 1292.0 lumens
Efficiency: N/A
Efficacy: 73.8 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

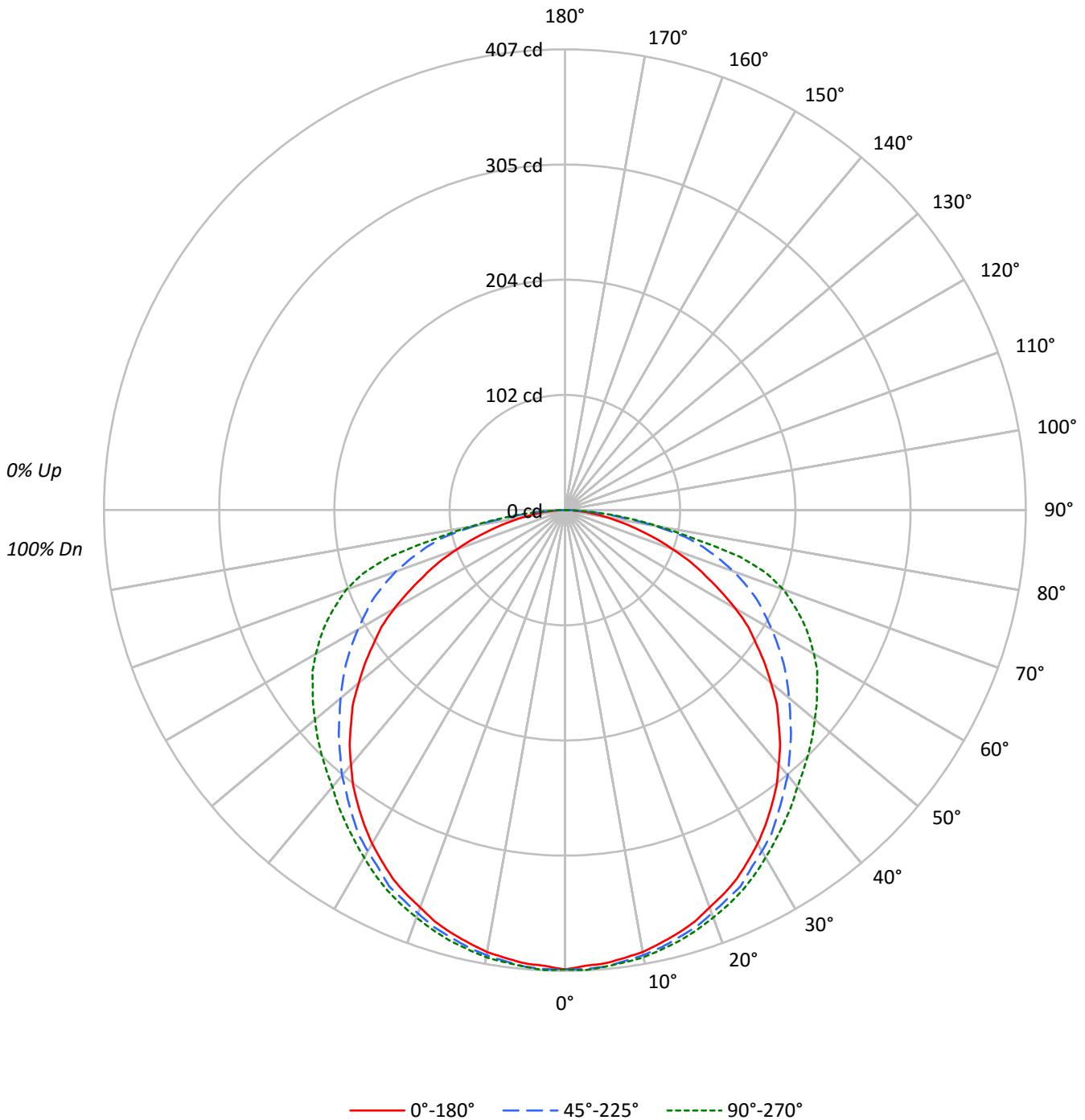
Input Watts (W): 17.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1092	1092	1092
5°	1086	1094	1094
10°	1083	1091	1096
15°	1078	1088	1096
20°	1070	1086	1097
25°	1067	1089	1101
30°	1057	1081	1102
35°	1046	1077	1108
40°	1032	1075	1122
45°	1016	1074	1157
50°	995	1082	1206
55°	967	1106	1275
60°	936	1136	1366
65°	872	1192	1477
70°	800	1249	1615
75°	702	1314	1670
80°	604	1252	1311
85°	528	911	997



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.4	3.0
10°-20°	110.2	8.5
20°-30°	168.2	13.0
30°-40°	205.3	15.9
40°-50°	219.5	17.0
50°-60°	211.9	16.4
60°-70°	182.4	14.1
70°-80°	123.4	9.6
80°-90°	32.6	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°	316.8	24.5
0°-40°	522.1	40.4
0°-60°	953.6	73.8
0°-90°	1292.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1292.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	406	406	406	406	406	
5°	402	403	405	405	405	38
15°	387	388	391	392	394	109
25°	359	361	367	369	371	165
35°	318	321	328	335	337	199
45°	267	272	282	296	304	206
55°	206	213	236	260	272	185
65°	137	150	187	217	232	136
75°	68	89	126	152	161	72
85°	17	24	30	30	32	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	405.8	405.8	405.8	405.8	405.8
2.5°	403.0	403.9	405.8	405.8	406.8
5°	402.0	403.0	404.9	404.9	404.9
7.5°	399.2	400.1	402.0	403.0	403.0
10°	396.3	397.3	399.2	400.1	401.1
12.5°	391.6	392.5	395.4	397.3	397.3
15°	386.8	387.8	390.6	392.5	393.5
17.5°	381.1	383.0	385.9	387.8	388.7
20°	373.5	375.4	379.2	382.1	383.0
22.5°	366.9	368.8	372.6	375.4	377.3
25°	359.3	361.2	366.9	368.8	370.7
27.5°	349.8	351.7	356.4	360.2	363.1
30°	340.3	342.2	347.9	352.6	354.5
32.5°	329.8	332.7	339.3	343.1	346.0
35°	318.4	321.3	327.9	334.6	337.4
37.5°	307.0	309.8	316.5	325.1	328.9
40°	293.7	297.5	306.0	317.4	319.3
42.5°	281.3	286.1	293.7	307.0	311.7
45°	267.1	271.8	282.3	296.5	304.1
47.5°	253.8	258.5	269.9	287.0	296.5
50°	237.6	244.3	258.5	278.5	288.0
52.5°	222.4	228.1	247.1	269.0	280.4
55°	206.2	212.9	235.7	259.5	271.8
57.5°	192.0	197.7	223.4	250.0	264.2
60°	173.9	181.5	211.0	239.5	253.8
62.5°	154.9	166.3	198.6	228.1	243.3
65°	136.9	150.2	187.2	216.7	231.9
67.5°	120.7	135.0	173.0	204.3	218.6
70°	101.7	119.8	158.7	189.1	205.3
72.5°	84.6	104.5	142.6	173.0	187.2
75°	67.5	89.3	126.4	152.1	160.6
77.5°	52.3	73.2	108.4	116.0	116.9
80°	39.0	58.0	80.8	81.7	84.6
82.5°	26.6	40.9	52.3	57.0	58.0
85°	17.1	23.8	29.5	30.4	32.3
87.5°	7.6	8.6	10.5	9.5	9.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)