

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: P312607

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-CP187-W2A-U-4000K**

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: P312607
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-4000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 4000K 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: 1279.0 lumens
Efficiency: N/A
Efficacy: 74.8 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

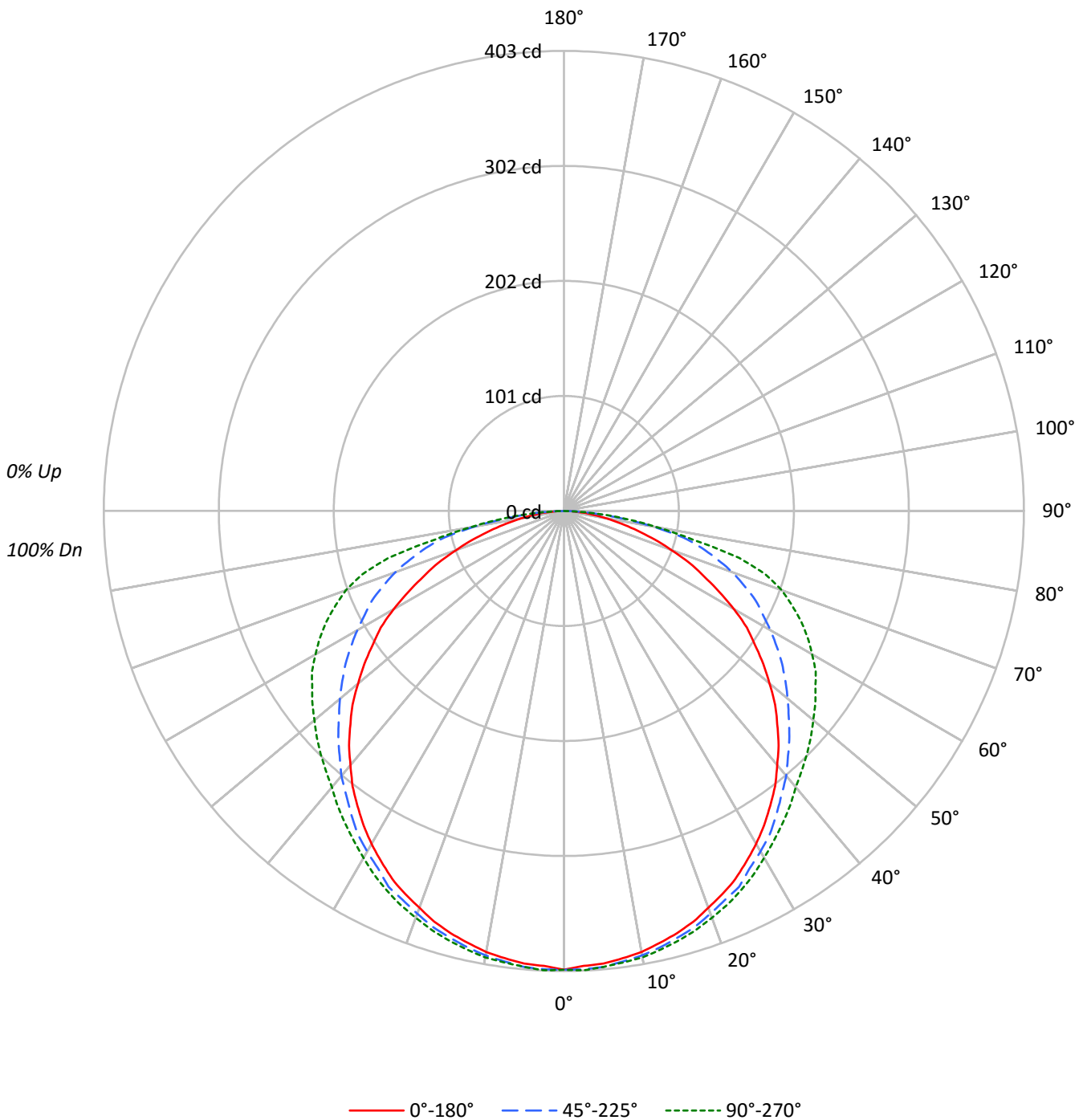
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1081	1081	1081
5°	1075	1083	1083
10°	1072	1080	1085
15°	1067	1077	1085
20°	1059	1075	1086
25°	1056	1078	1089
30°	1047	1070	1090
35°	1035	1066	1097
40°	1021	1064	1110
45°	1006	1063	1146
50°	985	1071	1194
55°	958	1095	1263
60°	927	1124	1352
65°	863	1181	1462
70°	792	1236	1599
75°	695	1301	1653
80°	598	1240	1297
85°	522	902	988



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.0	3.0
10°-20°	109.1	8.5
20°-30°	166.5	13.0
30°-40°	203.3	15.9
40°-50°	217.3	17.0
50°-60°	209.8	16.4
60°-70°	180.6	14.1
70°-80°	122.2	9.6
80°-90°	32.2	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°	313.6	24.5
0°-40°	516.9	40.4
0°-60°	944.0	73.8
0°-90°	1279.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1279.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	402	402	402	402	402	
5°	398	399	401	401	401	38
15°	383	384	387	389	390	108
25°	356	358	363	365	367	164
35°	315	318	325	331	334	197
45°	264	269	279	294	301	204
55°	204	211	233	257	269	183
65°	136	149	185	214	230	135
75°	67	88	125	150	159	72
85°	17	24	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°	401.8	401.8	401.8	401.8	401.8
2.5°	398.9	399.9	401.8	401.8	402.7
5°	398.0	398.9	400.8	400.8	400.8
7.5°	395.2	396.1	398.0	398.9	398.9
10°	392.3	393.3	395.2	396.1	397.1
12.5°	387.6	388.6	391.4	393.3	393.3
15°	382.9	383.9	386.7	388.6	389.5
17.5°	377.3	379.2	382.0	383.9	384.8
20°	369.8	371.6	375.4	378.2	379.2
22.5°	363.2	365.1	368.8	371.6	373.5
25°	355.7	357.5	363.2	365.1	366.9
27.5°	346.2	348.1	352.8	356.6	359.4
30°	336.8	338.7	344.4	349.1	350.9
32.5°	326.5	329.3	335.9	339.7	342.5
35°	315.2	318.0	324.6	331.2	334.0
37.5°	303.9	306.7	313.3	321.8	325.5
40°	290.7	294.5	303.0	314.3	316.1
42.5°	278.5	283.2	290.7	303.9	308.6
45°	264.4	269.1	279.4	293.6	301.1
47.5°	251.2	255.9	267.2	284.1	293.6
50°	235.2	241.8	255.9	275.7	285.1
52.5°	220.2	225.8	244.6	266.3	277.6
55°	204.2	210.8	233.3	256.9	269.1
57.5°	190.1	195.7	221.1	247.5	261.6
60°	172.2	179.7	208.9	237.1	251.2
62.5°	153.4	164.7	196.6	225.8	240.9
65°	135.5	148.7	185.4	214.5	229.6
67.5°	119.5	133.6	171.2	202.3	216.4
70°	100.7	118.6	157.1	187.2	203.2
72.5°	83.7	103.5	141.1	171.2	185.4
75°	66.8	88.4	125.1	150.5	159.0
77.5°	51.7	72.4	107.3	114.8	115.7
80°	38.6	57.4	80.0	80.9	83.7
82.5°	26.3	40.5	51.7	56.5	57.4
85°	16.9	23.5	29.2	30.1	32.0
87.5°	7.5	8.5	10.3	9.4	9.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)