

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: P308362

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-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: P308362
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-5000K
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: 1255.0 lumens
Efficiency: N/A
Efficacy: 73.4 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

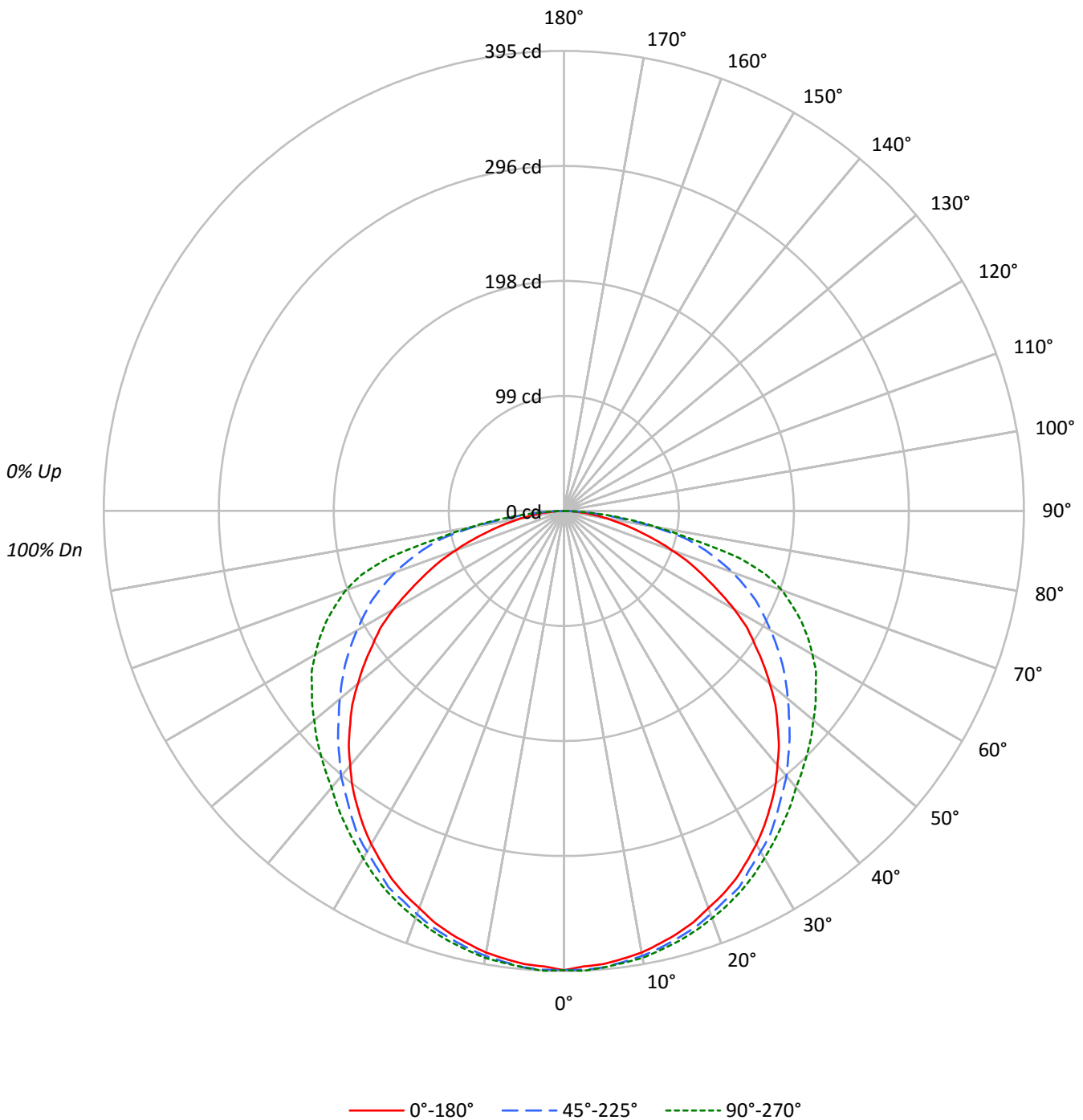
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1061	1061	1061
5°	1055	1062	1062
10°	1052	1060	1065
15°	1047	1057	1065
20°	1039	1055	1066
25°	1036	1058	1069
30°	1027	1050	1070
35°	1016	1046	1077
40°	1002	1044	1090
45°	987	1044	1124
50°	966	1051	1171
55°	940	1074	1239
60°	910	1103	1327
65°	846	1158	1435
70°	777	1213	1569
75°	681	1277	1622
80°	587	1216	1274
85°	513	883	969



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.3	3.0
10°-20°	107.1	8.5
20°-30°	163.4	13.0
30°-40°	199.5	15.9
40°-50°	213.3	17.0
50°-60°	205.8	16.4
60°-70°	177.2	14.1
70°-80°	119.9	9.6
80°-90°	31.6	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°	307.7	24.5
0°-40°	507.2	40.4
0°-60°	926.3	73.8
0°-90°	1255.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1255.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	394	394	394	394	394	
5°	390	391	393	393	393	37
15°	376	377	379	381	382	106
25°	349	351	356	358	360	161
35°	309	312	318	325	328	194
45°	259	264	274	288	295	200
55°	200	207	229	252	264	180
65°	133	146	182	210	225	132
75°	66	87	123	148	156	70
85°	17	23	29	30	31	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	394.2	394.2	394.2	394.2	394.2
2.5°	391.4	392.4	394.2	394.2	395.1
5°	390.5	391.4	393.3	393.3	393.3
7.5°	387.8	388.7	390.5	391.4	391.4
10°	385.0	385.9	387.8	388.7	389.6
12.5°	380.4	381.3	384.1	385.9	385.9
15°	375.8	376.7	379.4	381.3	382.2
17.5°	370.2	372.1	374.8	376.7	377.6
20°	362.8	364.7	368.4	371.1	372.1
22.5°	356.4	358.2	361.9	364.7	366.5
25°	349.0	350.8	356.4	358.2	360.1
27.5°	339.7	341.6	346.2	349.9	352.7
30°	330.5	332.4	337.9	342.5	344.4
32.5°	320.4	323.1	329.6	333.3	336.1
35°	309.3	312.1	318.5	325.0	327.7
37.5°	298.2	301.0	307.4	315.7	319.4
40°	285.3	289.0	297.3	308.4	310.2
42.5°	273.3	277.9	285.3	298.2	302.8
45°	259.4	264.0	274.2	288.0	295.4
47.5°	246.5	251.1	262.2	278.8	288.0
50°	230.8	237.3	251.1	270.5	279.7
52.5°	216.0	221.6	240.0	261.3	272.4
55°	200.3	206.8	229.0	252.0	264.0
57.5°	186.5	192.0	217.0	242.8	256.7
60°	169.0	176.3	205.0	232.7	246.5
62.5°	150.5	161.6	193.0	221.6	236.3
65°	132.9	145.9	181.9	210.5	225.3
67.5°	117.2	131.1	168.0	198.5	212.3
70°	98.8	116.3	154.2	183.7	199.4
72.5°	82.2	101.6	138.5	168.0	181.9
75°	65.5	86.8	122.8	147.7	156.0
77.5°	50.8	71.1	105.2	112.6	113.6
80°	37.9	56.3	78.5	79.4	82.2
82.5°	25.9	39.7	50.8	55.4	56.3
85°	16.6	23.1	28.6	29.5	31.4
87.5°	7.4	8.3	10.2	9.2	9.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)