

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: P312606

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-RDP-CP187-W2A-U-3500K**

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: P312606
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-3500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 1218.0 lumens
Efficiency: N/A
Efficacy: 72.9 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

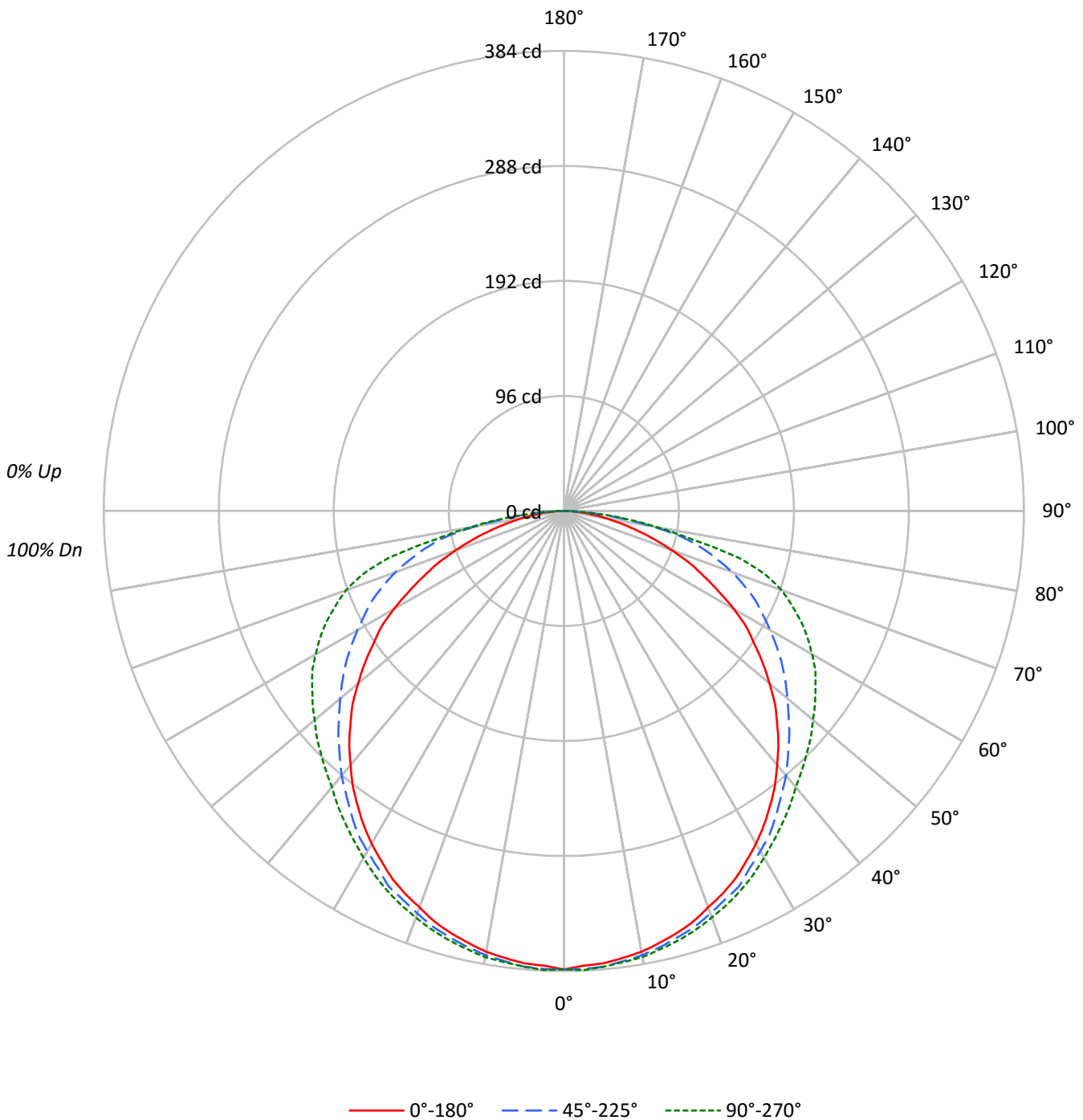
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1030	1030	1030
5°	1024	1031	1031
10°	1021	1028	1033
15°	1016	1026	1033
20°	1008	1024	1034
25°	1006	1027	1037
30°	997	1019	1038
35°	986	1015	1045
40°	973	1013	1058
45°	958	1013	1091
50°	938	1020	1137
55°	912	1042	1202
60°	883	1070	1287
65°	821	1124	1392
70°	755	1177	1522
75°	661	1239	1574
80°	569	1181	1235
85°	497	858	942



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	3.0
10°-20°	103.9	8.5
20°-30°	158.5	13.0
30°-40°	193.6	15.9
40°-50°	207.0	17.0
50°-60°	199.8	16.4
60°-70°	172.0	14.1
70°-80°	116.4	9.6
80°-90°	30.7	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°	298.6	24.5
0°-40°	492.2	40.4
0°-60°	899.0	73.8
0°-90°	1218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1218.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	383	383	383	383	383	
5°	379	380	382	382	382	36
15°	365	366	368	370	371	103
25°	339	340	346	348	349	156
35°	300	303	309	315	318	188
45°	252	256	266	280	287	194
55°	194	201	222	245	256	174
65°	129	142	176	204	219	128
75°	64	84	119	143	151	68
85°	16	22	28	29	30	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	382.6	382.6	382.6	382.6	382.6
2.5°	379.9	380.8	382.6	382.6	383.5
5°	379.0	379.9	381.7	381.7	381.7
7.5°	376.3	377.2	379.0	379.9	379.9
10°	373.6	374.5	376.3	377.2	378.1
12.5°	369.2	370.1	372.7	374.5	374.5
15°	364.7	365.6	368.3	370.1	370.9
17.5°	359.3	361.1	363.8	365.6	366.5
20°	352.1	353.9	357.5	360.2	361.1
22.5°	345.9	347.7	351.2	353.9	355.7
25°	338.7	340.5	345.9	347.7	349.4
27.5°	329.7	331.5	336.0	339.6	342.3
30°	320.8	322.6	327.9	332.4	334.2
32.5°	310.9	313.6	319.9	323.5	326.1
35°	300.2	302.9	309.1	315.4	318.1
37.5°	289.4	292.1	298.4	306.4	310.0
40°	276.9	280.5	288.5	299.3	301.1
42.5°	265.2	269.7	276.9	289.4	293.9
45°	251.8	256.3	266.1	279.6	286.7
47.5°	239.2	243.7	254.5	270.6	279.6
50°	224.0	230.3	243.7	262.5	271.5
52.5°	209.7	215.0	233.0	253.6	264.3
55°	194.4	200.7	222.2	244.6	256.3
57.5°	181.0	186.4	210.6	235.6	249.1
60°	164.0	171.1	198.9	225.8	239.2
62.5°	146.0	156.8	187.3	215.0	229.4
65°	129.0	141.6	176.5	204.3	218.6
67.5°	113.8	127.2	163.1	192.6	206.1
70°	95.9	112.9	149.6	178.3	193.5
72.5°	79.7	98.6	134.4	163.1	176.5
75°	63.6	84.2	119.2	143.4	151.4
77.5°	49.3	69.0	102.1	109.3	110.2
80°	36.7	54.7	76.2	77.1	79.7
82.5°	25.1	38.5	49.3	53.8	54.7
85°	16.1	22.4	27.8	28.7	30.5
87.5°	7.2	8.1	9.9	9.0	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)