

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: P312006

Luminaire Tested: **14FCZ2-20-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: P312006
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-43)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L83050-RDP-CP187-W2A-U-3500K
Description: 1'X4' 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: 1206.0 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

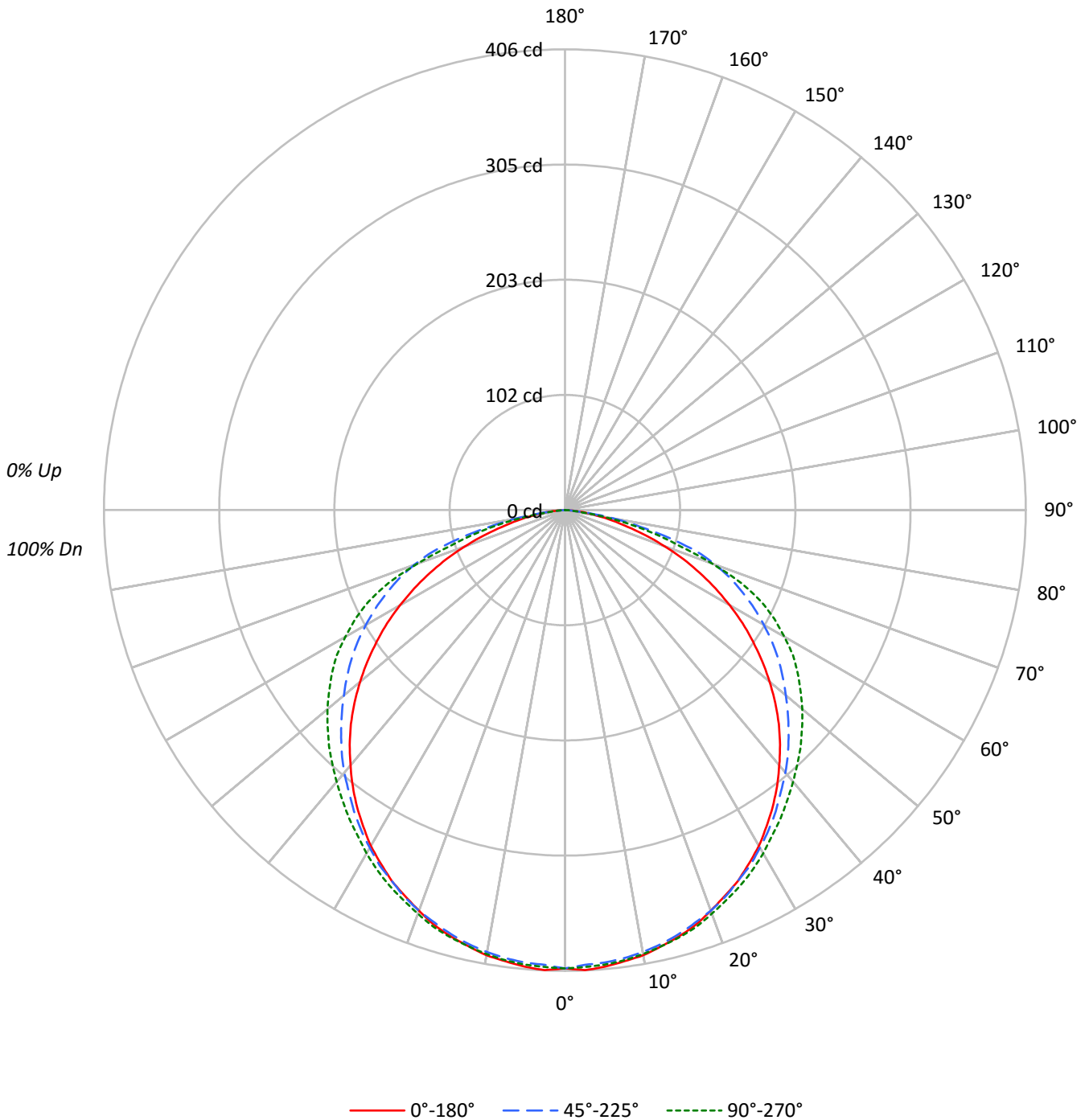
Input Watts (W): 16.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1087	1087	1087
5°	1091	1081	1086
10°	1088	1080	1086
15°	1083	1078	1086
20°	1076	1076	1084
25°	1071	1071	1085
30°	1062	1068	1085
35°	1049	1064	1089
40°	1032	1062	1098
45°	1014	1061	1118
50°	985	1064	1143
55°	950	1078	1175
60°	902	1089	1201
65°	833	1103	1217
70°	741	1111	1089
75°	597	998	871
80°	466	700	569
85°	321	204	145



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.2	3.2
10°-20°	109.7	9.1
20°-30°	167.0	13.8
30°-40°	203.4	16.9
40°-50°	215.8	17.9
50°-60°	203.7	16.9
60°-70°	164.5	13.6
70°-80°	89.2	7.4
80°-90°	14.4	1.2
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°	314.9	26.1
0°-40°	518.4	43.0
0°-60°	937.9	77.8
0°-90°	1206.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1206.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	404	404	404	404	404	
5°	404	403	400	403	402	38
15°	389	388	387	390	390	110
25°	361	360	361	364	365	166
35°	319	321	324	330	331	200
45°	266	270	279	289	294	205
55°	202	211	230	245	250	181
65°	131	147	173	187	191	130
75°	57	84	96	87	84	63
85°	10	11	7	6	5	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	403.9	403.9	403.9	403.9	403.9
2.5°	405.8	403.9	401.1	403.9	403.0
5°	403.9	403.0	400.2	403.0	402.0
7.5°	401.1	401.1	398.3	400.2	400.2
10°	398.3	397.3	395.4	398.3	397.3
12.5°	393.6	392.6	391.7	394.5	393.6
15°	388.9	387.9	387.0	389.8	389.8
17.5°	383.2	382.3	381.3	385.1	385.1
20°	375.7	375.7	375.7	379.4	378.5
22.5°	368.1	368.1	369.1	372.8	371.9
25°	360.6	359.7	360.6	364.4	365.3
27.5°	351.2	352.1	353.1	356.8	357.8
30°	341.8	342.7	343.7	348.4	349.3
32.5°	330.5	332.4	334.2	339.9	339.9
35°	319.2	321.1	323.9	330.5	331.4
37.5°	306.9	308.8	312.6	320.1	322.0
40°	293.8	296.6	302.2	309.8	312.6
42.5°	280.6	284.3	290.9	299.4	303.2
45°	266.5	270.2	278.7	289.1	293.8
47.5°	251.4	256.1	266.5	279.6	283.4
50°	235.4	242.0	254.2	268.3	273.0
52.5°	219.4	226.9	242.0	257.0	261.7
55°	202.4	210.9	229.7	244.8	250.4
57.5°	185.5	194.9	216.6	232.6	238.2
60°	167.6	178.9	202.4	218.4	223.1
62.5°	149.7	162.9	188.3	204.3	208.1
65°	130.9	146.9	173.2	187.4	191.1
67.5°	113.0	131.8	158.2	168.5	168.5
70°	94.2	114.9	141.2	144.1	138.4
72.5°	75.3	98.9	122.4	112.0	107.3
75°	57.4	83.8	96.0	86.6	83.8
77.5°	43.3	67.8	67.8	62.1	60.3
80°	30.1	51.8	45.2	39.5	36.7
82.5°	19.8	29.2	23.5	18.8	16.0
85°	10.4	11.3	6.6	5.6	4.7
87.5°	3.8	1.9	0.9	1.9	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)