

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: P312231

Luminaire Tested: **14FCZ2-35-UNV-L83050-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: P312231
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-35-UNV-L83050-CP187-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 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: 3152.0 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

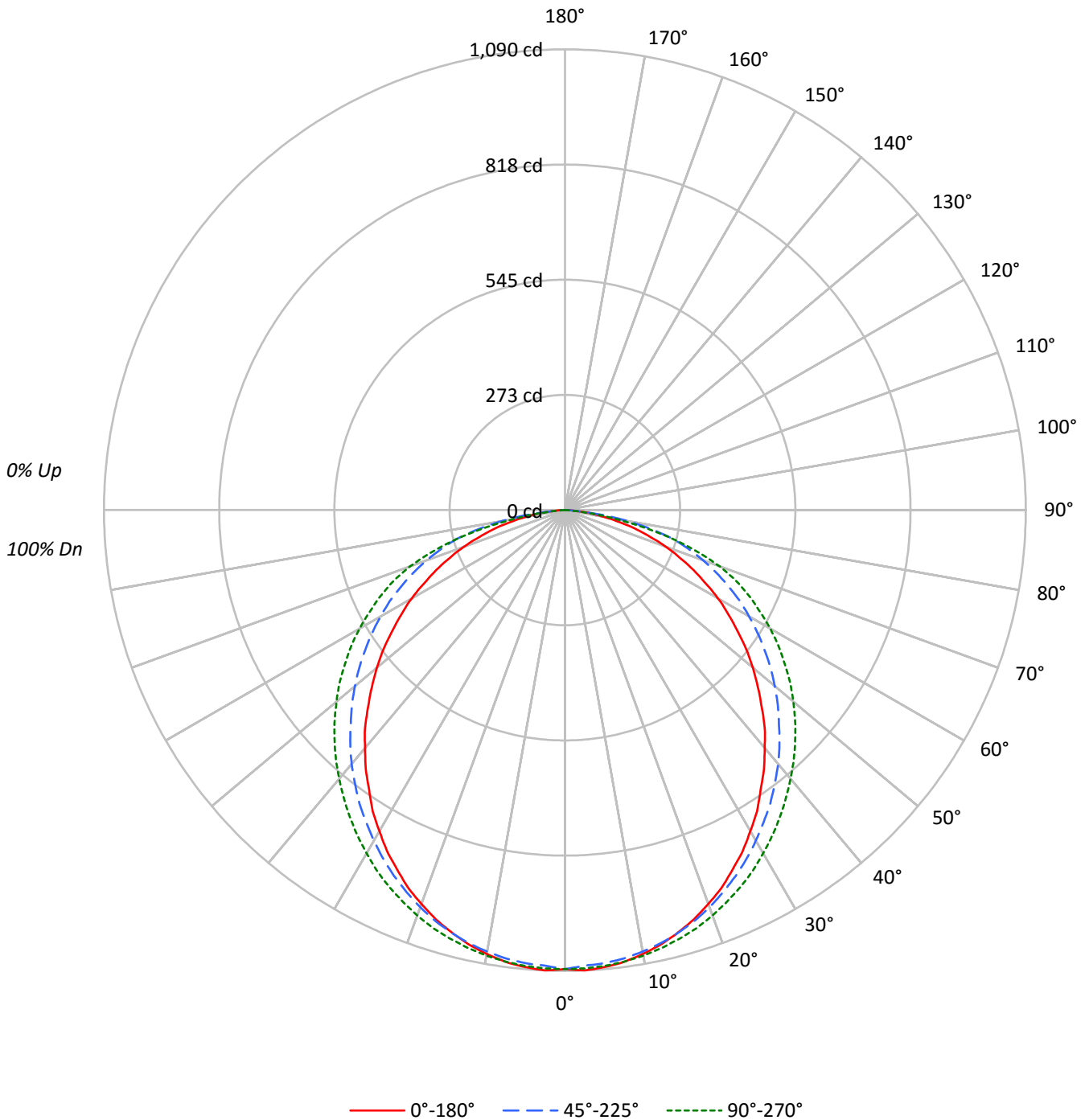
Input Watts (W): 29.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	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	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2922	2922	2922
5°	2931	2907	2924
10°	2913	2898	2925
15°	2882	2884	2923
20°	2840	2864	2922
25°	2786	2836	2920
30°	2725	2806	2913
35°	2653	2782	2912
40°	2583	2755	2916
45°	2504	2726	2931
50°	2430	2713	2951
55°	2338	2704	2978
60°	2255	2708	3019
65°	2139	2716	3065
70°	2007	2737	3064
75°	1820	2763	2770
80°	1492	2385	1971
85°	1105	1127	457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.8	3.3
10°-20°	293.5	9.3
20°-30°	442.2	14.0
30°-40°	530.6	16.8
40°-50°	553.0	17.5
50°-60°	512.0	16.2
60°-70°	413.7	13.1
70°-80°	252.2	8.0
80°-90°	52.1	1.7
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°	838.4	26.6
0°-40°	1369.0	43.4
0°-60°	2434.0	77.2
0°-90°	3152.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3152.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1085	1082	1076	1084	1082	103
15°	1035	1035	1035	1049	1049	292
25°	938	944	955	979	983	432
35°	808	820	847	878	886	506
45°	658	678	716	756	770	508
55°	498	524	576	621	635	446
65°	336	369	427	470	481	332
75°	175	214	266	270	266	184
85°	36	53	36	20	15	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1090.1	1086.6	1078.8	1086.6	1085.2
5°	1085.2	1082.4	1076.0	1083.8	1082.4
7.5°	1078.1	1075.3	1069.7	1078.8	1077.4
10°	1066.2	1064.8	1060.6	1071.1	1070.4
12.5°	1052.1	1051.4	1049.3	1061.3	1060.6
15°	1034.6	1035.3	1035.3	1049.3	1049.3
17.5°	1014.9	1016.3	1019.1	1034.6	1036.7
20°	991.7	994.5	1000.1	1017.7	1020.5
22.5°	967.8	969.9	978.3	999.4	1002.2
25°	938.3	943.9	955.1	979.0	983.3
27.5°	910.2	915.1	930.5	955.1	962.2
30°	877.1	884.9	903.1	929.8	937.6
32.5°	845.5	853.9	875.0	905.9	913.0
35°	807.6	820.2	846.9	877.8	886.3
37.5°	773.1	785.1	815.3	849.0	858.9
40°	735.2	749.9	784.4	820.2	830.0
42.5°	700.0	714.1	751.3	787.9	801.2
45°	657.9	677.5	716.2	756.2	770.3
47.5°	619.2	638.9	683.2	726.0	738.7
50°	580.5	601.6	648.0	692.3	704.9
52.5°	540.5	563.0	612.9	657.1	671.9
55°	498.3	524.3	576.3	621.3	634.7
57.5°	458.2	485.0	540.5	586.2	599.5
60°	418.9	446.3	503.2	546.8	560.9
62.5°	375.3	407.6	466.7	509.6	520.1
65°	336.0	369.0	426.6	469.5	481.4
67.5°	294.5	330.3	388.0	427.3	438.6
70°	255.1	292.4	347.9	384.4	389.4
72.5°	213.0	250.9	307.1	330.3	330.3
75°	175.0	213.7	265.7	269.9	266.4
77.5°	133.5	176.4	210.1	201.7	193.3
80°	96.3	138.5	153.9	138.5	127.2
82.5°	64.7	100.5	92.8	73.8	65.4
85°	35.8	53.4	36.5	20.4	14.8
87.5°	13.4	11.9	3.5	3.5	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)