

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: P312406

Luminaire Tested: **14FCZ2-39-UNV-L83050-S-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: P312406
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-39-UNV-L83050-S-CP187-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH 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: 3515.0 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

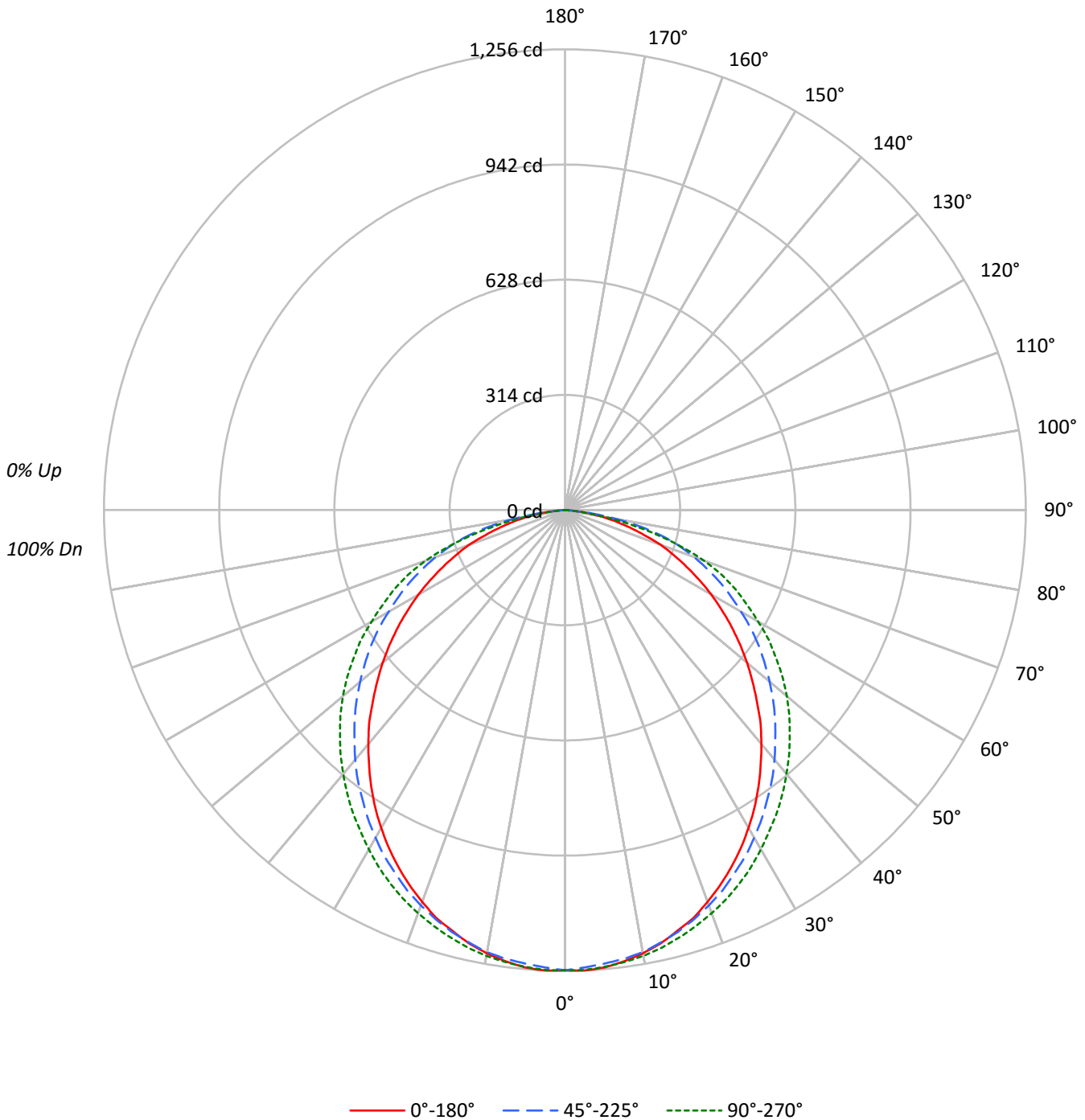
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3377	3377	3377
5°	3380	3352	3375
10°	3352	3343	3372
15°	3306	3316	3360
20°	3254	3284	3349
25°	3187	3244	3338
30°	3109	3206	3320
35°	3023	3160	3309
40°	2926	3122	3300
45°	2819	3084	3296
50°	2714	3050	3305
55°	2600	3025	3295
60°	2476	2983	3273
65°	2330	2974	3273
70°	2194	2948	3181
75°	1903	2881	2718
80°	1539	2323	1810
85°	1022	806	537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.5	3.4
10°-20°	337.2	9.6
20°-30°	505.8	14.4
30°-40°	603.3	17.2
40°-50°	623.7	17.7
50°-60°	569.5	16.2
60°-70°	448.1	12.7
70°-80°	260.9	7.4
80°-90°	48.1	1.4
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°	961.4	27.4
0°-40°	1564.8	44.5
0°-60°	2757.9	78.5
0°-90°	3515.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3515.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1255	1255	1255	1255	1255	
5°	1251	1248	1241	1251	1250	119
15°	1187	1189	1190	1206	1206	335
25°	1074	1079	1093	1119	1124	494
35°	920	932	962	999	1007	575
45°	741	765	810	856	866	572
55°	554	584	645	692	702	496
65°	366	404	467	504	514	363
75°	183	227	277	272	261	195
85°	33	47	26	21	17	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1254.8	1254.8	1254.8	1254.8	1254.8
2.5°	1256.5	1253.1	1247.8	1256.5	1254.8
5°	1251.3	1247.8	1240.9	1251.3	1249.6
7.5°	1240.9	1237.4	1233.9	1244.3	1242.6
10°	1226.9	1225.2	1223.4	1235.6	1233.9
12.5°	1209.5	1209.5	1207.7	1221.7	1221.7
15°	1186.8	1188.6	1190.3	1206.0	1206.0
17.5°	1165.9	1164.2	1169.4	1186.8	1188.6
20°	1136.3	1139.8	1146.7	1167.7	1169.4
22.5°	1106.7	1110.1	1122.3	1143.3	1148.5
25°	1073.5	1078.8	1092.7	1118.9	1124.1
27.5°	1038.7	1045.7	1064.8	1092.7	1097.9
30°	1000.4	1010.8	1031.7	1063.1	1068.3
32.5°	962.0	972.5	998.6	1030.0	1037.0
35°	920.2	932.4	962.0	998.6	1007.3
37.5°	876.6	892.3	927.2	963.8	974.2
40°	833.0	850.5	888.8	927.2	939.4
42.5°	789.5	806.9	848.7	892.3	904.5
45°	740.7	765.1	810.4	855.7	866.2
47.5°	693.6	719.8	770.3	815.6	829.6
50°	648.3	674.5	728.5	775.5	789.5
52.5°	601.3	629.1	686.7	735.5	747.6
55°	554.2	583.8	644.8	691.9	702.3
57.5°	507.1	538.5	601.3	646.6	658.8
60°	460.1	493.2	554.2	599.5	608.2
62.5°	413.0	447.9	510.6	550.7	559.4
65°	366.0	404.3	467.1	503.7	514.1
67.5°	320.7	359.0	420.0	454.9	463.6
70°	278.8	313.7	374.7	400.8	404.3
72.5°	226.6	270.1	329.4	343.3	334.6
75°	183.0	226.6	277.1	271.9	261.4
77.5°	139.4	183.0	216.1	198.7	184.7
80°	99.3	142.9	149.9	123.7	116.8
82.5°	64.5	99.3	83.7	64.5	52.3
85°	33.1	47.1	26.1	20.9	17.4
87.5°	10.5	7.0	3.5	3.5	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)