

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: P312382

Luminaire Tested: **14FCZ2-35-UNV-L83050-S-CP187-W2A-U-4000K**

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: P312382
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: 14FCZ2-35-UNV-L83050-S-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4000K 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: 3345.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

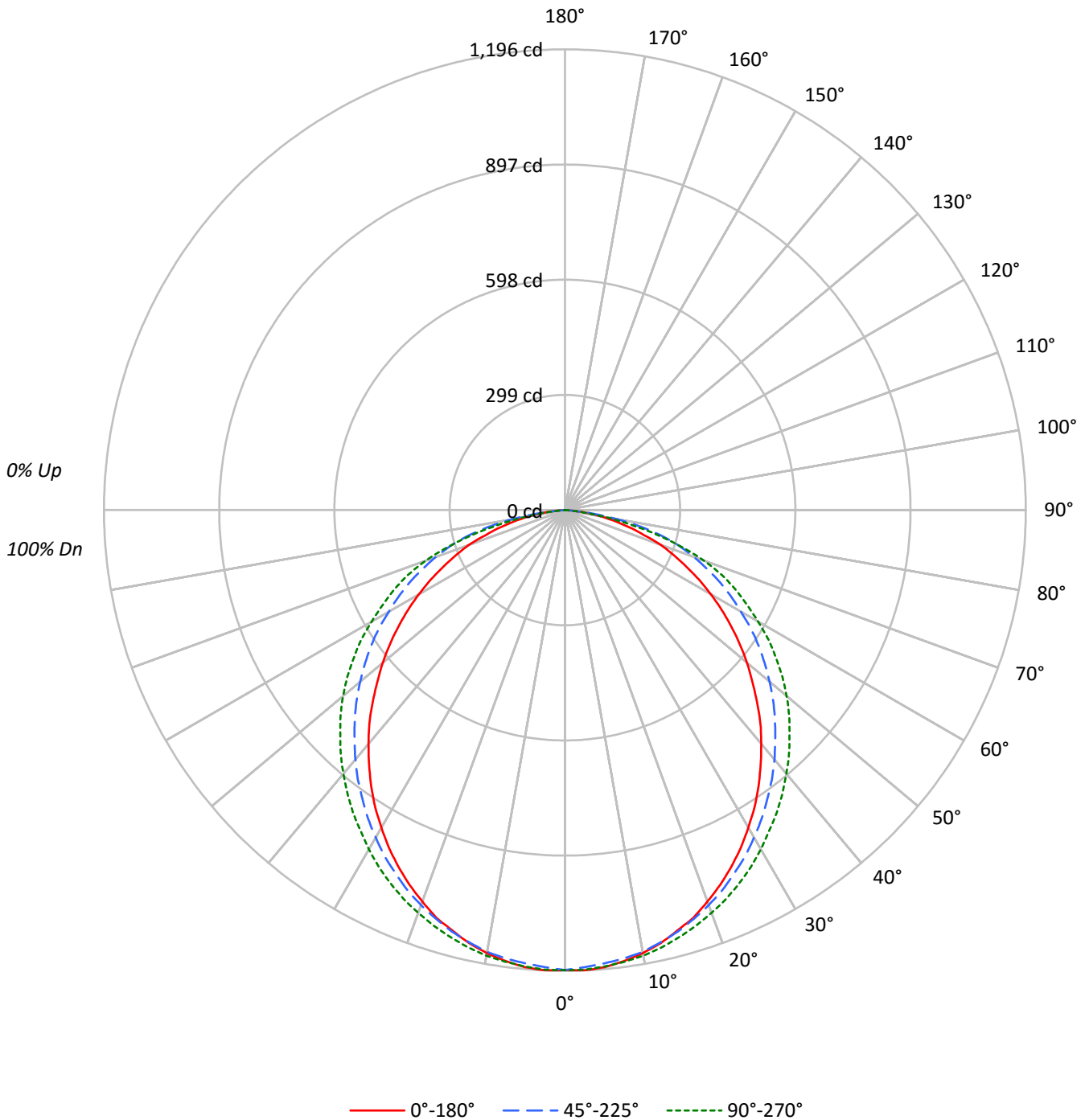
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3213	3213	3213
5°	3217	3190	3212
10°	3190	3181	3208
15°	3146	3156	3197
20°	3096	3125	3187
25°	3033	3088	3176
30°	2958	3051	3159
35°	2877	3007	3149
40°	2785	2971	3140
45°	2683	2935	3137
50°	2583	2902	3145
55°	2474	2879	3136
60°	2356	2838	3115
65°	2218	2830	3116
70°	2088	2806	3028
75°	1810	2742	2587
80°	1464	2210	1722
85°	973	769	513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.8	3.4
10°-20°	320.9	9.6
20°-30°	481.3	14.4
30°-40°	574.1	17.2
40°-50°	593.6	17.7
50°-60°	541.9	16.2
60°-70°	426.5	12.7
70°-80°	248.3	7.4
80°-90°	45.7	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°	914.9	27.4
0°-40°	1489.1	44.5
0°-60°	2624.5	78.5
0°-90°	3345.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3345.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1194	1194	1194	1194	1194	
5°	1191	1188	1181	1191	1189	113
15°	1129	1131	1133	1148	1148	319
25°	1022	1027	1040	1065	1070	470
35°	876	887	916	950	959	547
45°	705	728	771	814	824	544
55°	527	556	614	658	668	472
65°	348	385	444	479	489	346
75°	174	216	264	259	249	185
85°	32	45	25	20	17	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1194.1	1194.1	1194.1	1194.1	1194.1
2.5°	1195.8	1192.5	1187.5	1195.8	1194.1
5°	1190.8	1187.5	1180.8	1190.8	1189.1
7.5°	1180.8	1177.5	1174.2	1184.2	1182.5
10°	1167.6	1165.9	1164.3	1175.9	1174.2
12.5°	1151.0	1151.0	1149.3	1162.6	1162.6
15°	1129.4	1131.1	1132.7	1147.7	1147.7
17.5°	1109.5	1107.9	1112.8	1129.4	1131.1
20°	1081.3	1084.6	1091.3	1111.2	1112.8
22.5°	1053.1	1056.5	1068.1	1088.0	1092.9
25°	1021.6	1026.6	1039.9	1064.7	1069.7
27.5°	988.5	995.1	1013.3	1039.9	1044.8
30°	952.0	961.9	981.8	1011.7	1016.7
32.5°	915.5	925.4	950.3	980.2	986.8
35°	875.7	887.3	915.5	950.3	958.6
37.5°	834.2	849.1	882.3	917.1	927.1
40°	792.8	809.3	845.8	882.3	893.9
42.5°	751.3	767.9	807.7	849.1	860.8
45°	704.9	728.1	771.2	814.3	824.3
47.5°	660.1	685.0	733.1	776.2	789.4
50°	617.0	641.8	693.2	738.0	751.3
52.5°	572.2	598.7	653.4	699.9	711.5
55°	527.4	555.6	613.6	658.4	668.4
57.5°	482.6	512.5	572.2	615.3	626.9
60°	437.8	469.4	527.4	570.5	578.8
62.5°	393.1	426.2	485.9	524.1	532.4
65°	348.3	384.8	444.5	479.3	489.3
67.5°	305.2	341.6	399.7	432.9	441.2
70°	265.4	298.5	356.6	381.5	384.8
72.5°	215.6	257.1	313.5	326.7	318.4
75°	174.1	215.6	263.7	258.7	248.8
77.5°	132.7	174.1	205.7	189.1	175.8
80°	94.5	136.0	142.6	117.8	111.1
82.5°	61.4	94.5	79.6	61.4	49.8
85°	31.5	44.8	24.9	19.9	16.6
87.5°	10.0	6.6	3.3	3.3	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)