

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: P312389

Luminaire Tested: **14FCZ2-35-UNV-L83050-S-CP250-W2A-U-5000K**

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: P312389
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-CP250-W2A-U-5000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 3349.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

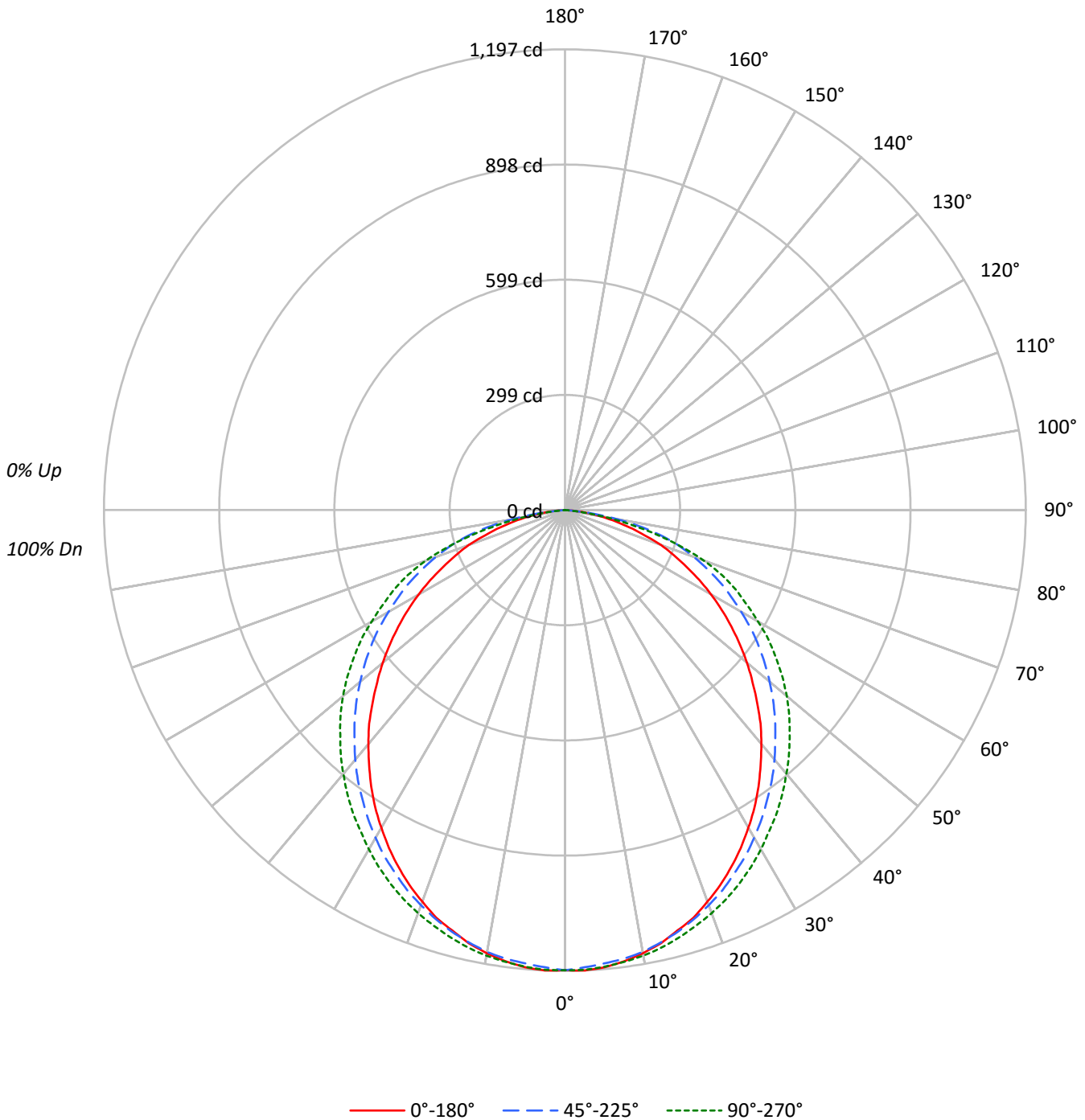
Input Watts (W): 30.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3217	3217	3217
5°	3220	3194	3216
10°	3194	3185	3212
15°	3150	3159	3201
20°	3100	3129	3191
25°	3037	3091	3180
30°	2962	3054	3163
35°	2880	3011	3153
40°	2788	2975	3144
45°	2686	2938	3141
50°	2586	2906	3149
55°	2477	2883	3140
60°	2359	2842	3119
65°	2220	2833	3119
70°	2090	2809	3031
75°	1812	2745	2590
80°	1466	2213	1725
85°	973	769	513



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.9	3.4
10°-20°	321.2	9.6
20°-30°	481.9	14.4
30°-40°	574.8	17.2
40°-50°	594.3	17.7
50°-60°	542.6	16.2
60°-70°	427.0	12.7
70°-80°	248.5	7.4
80°-90°	45.8	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°	916.0	27.4
0°-40°	1490.8	44.5
0°-60°	2627.7	78.5
0°-90°	3349.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3349.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1196	1196	1196	1196	1196	
5°	1192	1189	1182	1192	1191	113
15°	1131	1132	1134	1149	1149	319
25°	1023	1028	1041	1066	1071	471
35°	877	888	917	951	960	548
45°	706	729	772	815	825	545
55°	528	556	614	659	669	472
65°	349	385	445	480	490	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°	1195.5	1195.5	1195.5	1195.5	1195.5
2.5°	1197.2	1193.9	1188.9	1197.2	1195.5
5°	1192.2	1188.9	1182.3	1192.2	1190.6
7.5°	1182.3	1178.9	1175.6	1185.6	1183.9
10°	1169.0	1167.3	1165.6	1177.3	1175.6
12.5°	1152.4	1152.4	1150.7	1164.0	1164.0
15°	1130.8	1132.4	1134.1	1149.0	1149.0
17.5°	1110.9	1109.2	1114.2	1130.8	1132.4
20°	1082.6	1085.9	1092.6	1112.5	1114.2
22.5°	1054.4	1057.7	1069.3	1089.3	1094.2
25°	1022.8	1027.8	1041.1	1066.0	1071.0
27.5°	989.6	996.3	1014.5	1041.1	1046.1
30°	953.1	963.1	983.0	1012.9	1017.9
32.5°	916.6	926.5	951.4	981.3	988.0
35°	876.7	888.4	916.6	951.4	959.8
37.5°	835.2	850.2	883.4	918.2	928.2
40°	793.7	810.3	846.8	883.4	895.0
42.5°	752.2	768.8	808.6	850.2	861.8
45°	705.7	728.9	772.1	815.3	825.3
47.5°	660.9	685.8	733.9	777.1	790.4
50°	617.7	642.6	694.1	738.9	752.2
52.5°	572.9	599.4	654.2	700.7	712.3
55°	528.0	556.3	614.4	659.2	669.2
57.5°	483.2	513.1	572.9	616.0	627.7
60°	438.4	469.9	528.0	571.2	579.5
62.5°	393.5	426.7	486.5	524.7	533.0
65°	348.7	385.2	445.0	479.9	489.8
67.5°	305.5	342.1	400.2	433.4	441.7
70°	265.7	298.9	357.0	381.9	385.2
72.5°	215.9	257.4	313.8	327.1	318.8
75°	174.3	215.9	264.0	259.0	249.1
77.5°	132.8	174.3	205.9	189.3	176.0
80°	94.6	136.2	142.8	117.9	111.3
82.5°	61.4	94.6	79.7	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)