

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: P312387

Luminaire Tested: **14FCZ2-35-UNV-L83050-S-CP250-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: P312387
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-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.250" 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: 3317.0 lumens
Efficiency: N/A
Efficacy: 109.8 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

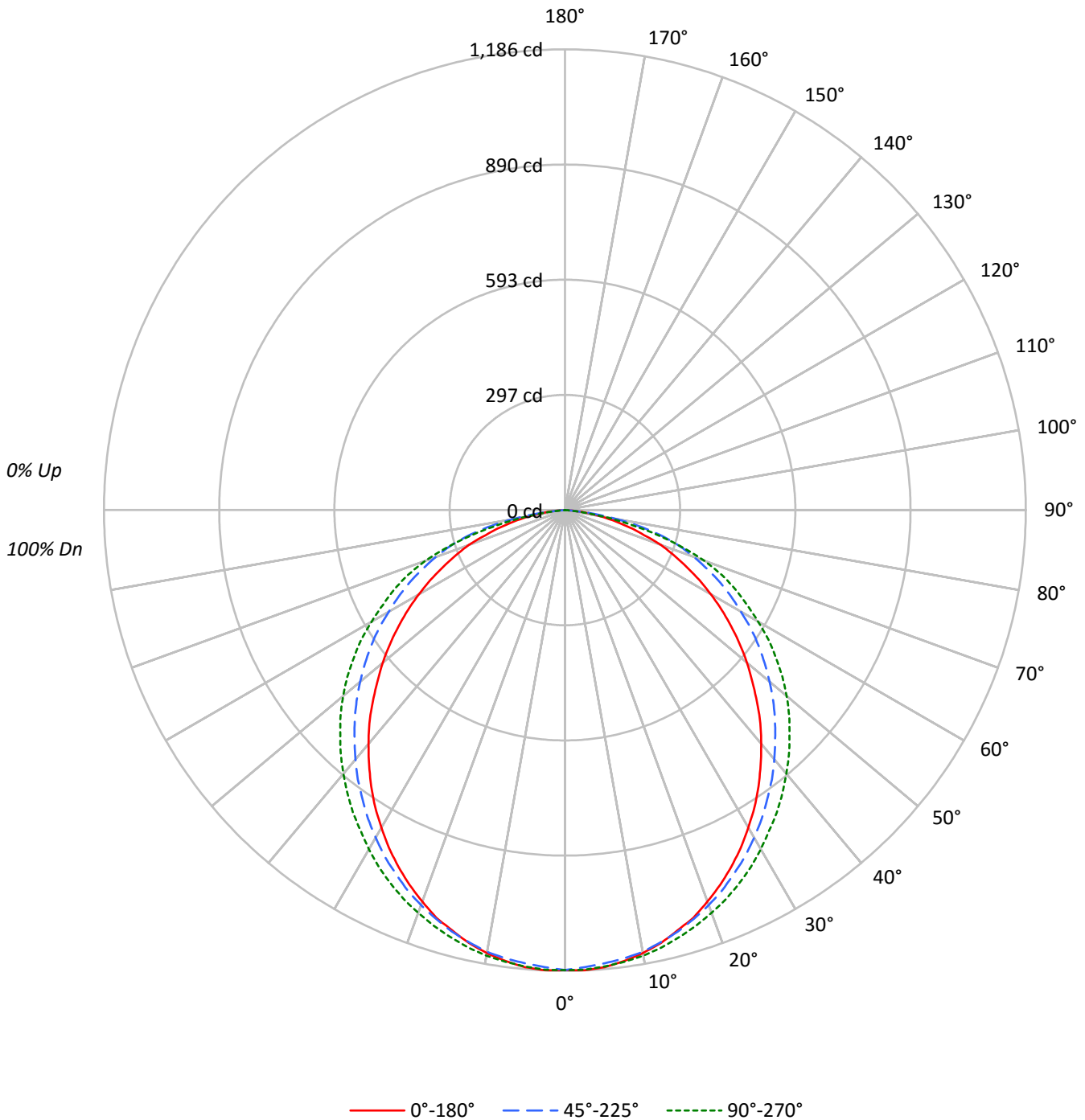
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3186	3186	3186
5°	3190	3163	3185
10°	3164	3155	3182
15°	3120	3129	3171
20°	3071	3099	3160
25°	3008	3062	3150
30°	2933	3025	3132
35°	2853	2982	3123
40°	2761	2946	3114
45°	2660	2910	3111
50°	2561	2878	3119
55°	2454	2855	3110
60°	2337	2815	3089
65°	2199	2807	3089
70°	2070	2782	3002
75°	1796	2719	2565
80°	1452	2191	1708
85°	963	763	506



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.8	3.4
10°-20°	318.2	9.6
20°-30°	477.3	14.4
30°-40°	569.3	17.2
40°-50°	588.6	17.7
50°-60°	537.4	16.2
60°-70°	422.9	12.7
70°-80°	246.2	7.4
80°-90°	45.4	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°	907.3	27.4
0°-40°	1476.6	44.5
0°-60°	2602.6	78.5
0°-90°	3317.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3317.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1184	1184	1184	1184	1184	
5°	1181	1178	1171	1181	1179	112
15°	1120	1122	1123	1138	1138	316
25°	1013	1018	1031	1056	1061	466
35°	868	880	908	942	951	543
45°	699	722	765	808	817	540
55°	523	551	608	653	663	468
65°	345	382	441	475	485	343
75°	173	214	262	257	247	184
85°	31	44	25	20	16	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1184.1	1184.1	1184.1	1184.1	1184.1
2.5°	1185.8	1182.5	1177.5	1185.8	1184.1
5°	1180.8	1177.5	1171.0	1180.8	1179.2
7.5°	1171.0	1167.7	1164.4	1174.2	1172.6
10°	1157.8	1156.2	1154.5	1166.0	1164.4
12.5°	1141.4	1141.4	1139.7	1152.9	1152.9
15°	1120.0	1121.6	1123.3	1138.1	1138.1
17.5°	1100.2	1098.6	1103.5	1120.0	1121.6
20°	1072.3	1075.6	1082.1	1101.9	1103.5
22.5°	1044.3	1047.6	1059.1	1078.9	1083.8
25°	1013.1	1018.0	1031.2	1055.8	1060.8
27.5°	980.2	986.8	1004.9	1031.2	1036.1
30°	944.0	953.9	973.6	1003.2	1008.1
32.5°	907.8	917.7	942.4	972.0	978.5
35°	868.4	879.9	907.8	942.4	950.6
37.5°	827.2	842.0	874.9	909.5	919.3
40°	786.1	802.6	838.7	874.9	886.4
42.5°	745.0	761.5	800.9	842.0	853.5
45°	699.0	722.0	764.7	807.5	817.4
47.5°	654.6	679.2	726.9	769.7	782.8
50°	611.8	636.5	687.4	731.8	745.0
52.5°	567.4	593.7	648.0	694.0	705.5
55°	523.0	550.9	608.5	652.9	662.8
57.5°	478.6	508.2	567.4	610.1	621.7
60°	434.2	465.4	523.0	565.7	574.0
62.5°	389.8	422.7	481.9	519.7	527.9
65°	345.4	381.5	440.8	475.3	485.2
67.5°	302.6	338.8	396.3	429.2	437.5
70°	263.1	296.0	353.6	378.3	381.5
72.5°	213.8	254.9	310.8	324.0	315.8
75°	172.7	213.8	261.5	256.6	246.7
77.5°	131.6	172.7	203.9	187.5	174.3
80°	93.7	134.9	141.4	116.8	110.2
82.5°	60.9	93.7	78.9	60.9	49.3
85°	31.2	44.4	24.7	19.7	16.4
87.5°	9.9	6.6	3.3	3.3	1.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)