

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: P312383

Luminaire Tested: **14FCZ2-35-UNV-L83050-S-CP187-W2A-U-4500K**

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: P312383
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-4500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4500K 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: 3376.0 lumens
Efficiency: N/A
Efficacy: 109.3 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

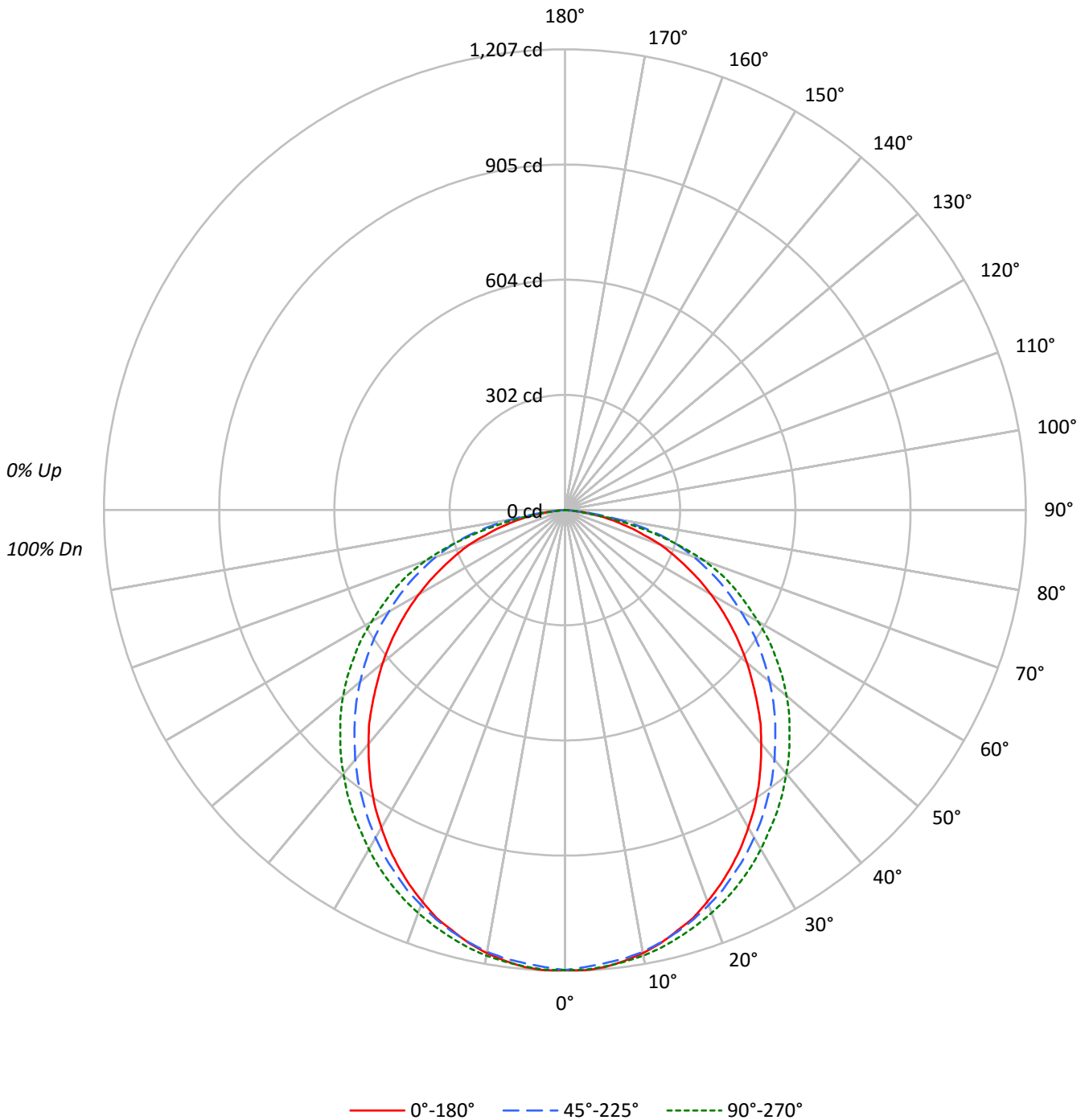
Input Watts (W): 30.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3243	3243	3243
5°	3246	3219	3242
10°	3220	3211	3238
15°	3176	3185	3227
20°	3125	3154	3216
25°	3062	3116	3206
30°	2985	3079	3188
35°	2903	3035	3178
40°	2811	2999	3169
45°	2707	2962	3166
50°	2607	2929	3175
55°	2497	2905	3165
60°	2378	2865	3144
65°	2238	2856	3144
70°	2107	2832	3055
75°	1828	2767	2611
80°	1478	2232	1737
85°	982	775	516



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.8	3.4
10°-20°	323.8	9.6
20°-30°	485.8	14.4
30°-40°	579.5	17.2
40°-50°	599.1	17.7
50°-60°	546.9	16.2
60°-70°	430.4	12.7
70°-80°	250.5	7.4
80°-90°	46.1	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°	923.4	27.4
0°-40°	1502.9	44.5
0°-60°	2648.9	78.5
0°-90°	3376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3376.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1205	1205	1205	1205	1205	
5°	1202	1198	1192	1202	1200	114
15°	1140	1142	1143	1158	1158	322
25°	1031	1036	1050	1075	1080	475
35°	884	896	924	959	968	552
45°	711	735	778	822	832	549
55°	532	561	619	664	675	476
65°	352	388	449	484	494	349
75°	176	218	266	261	251	187
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°	1205.2	1205.2	1205.2	1205.2	1205.2
2.5°	1206.8	1203.5	1198.5	1206.8	1205.2
5°	1201.8	1198.5	1191.8	1201.8	1200.2
7.5°	1191.8	1188.4	1185.1	1195.1	1193.5
10°	1178.4	1176.7	1175.0	1186.8	1185.1
12.5°	1161.7	1161.7	1160.0	1173.4	1173.4
15°	1139.9	1141.6	1143.2	1158.3	1158.3
17.5°	1119.8	1118.1	1123.2	1139.9	1141.6
20°	1091.4	1094.7	1101.4	1121.5	1123.2
22.5°	1062.9	1066.2	1078.0	1098.0	1103.1
25°	1031.1	1036.1	1049.5	1074.6	1079.6
27.5°	997.6	1004.3	1022.7	1049.5	1054.5
30°	960.8	970.8	990.9	1021.1	1026.1
32.5°	924.0	934.0	959.1	989.2	995.9
35°	883.8	895.5	924.0	959.1	967.5
37.5°	841.9	857.0	890.5	925.6	935.7
40°	800.1	816.8	853.7	890.5	902.2
42.5°	758.3	775.0	815.2	857.0	868.7
45°	711.4	734.8	778.3	821.9	831.9
47.5°	666.2	691.3	739.8	783.4	796.8
50°	622.7	647.8	699.7	744.9	758.3
52.5°	577.5	604.3	659.5	706.4	718.1
55°	532.3	560.7	619.3	664.5	674.6
57.5°	487.1	517.2	577.5	621.0	632.7
60°	441.9	473.7	532.3	575.8	584.2
62.5°	396.7	430.2	490.4	528.9	537.3
65°	351.5	388.3	448.6	483.7	493.8
67.5°	308.0	344.8	403.4	436.9	445.2
70°	267.8	301.3	359.9	385.0	388.3
72.5°	217.6	259.4	316.4	329.7	321.4
75°	175.8	217.6	266.1	261.1	251.1
77.5°	133.9	175.8	207.6	190.8	177.4
80°	95.4	137.3	144.0	118.8	112.1
82.5°	61.9	95.4	80.3	61.9	50.2
85°	31.8	45.2	25.1	20.1	16.7
87.5°	10.0	6.7	3.3	3.3	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)