

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: P311930

Luminaire Tested: **14FCZ2-35-UNV-L83050-HRP-CP187-W2A-U-3000K**

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: P311930
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
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-HRP-CP187-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 3000K 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: 2260.0 lumens
Efficiency: N/A
Efficacy: 76.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

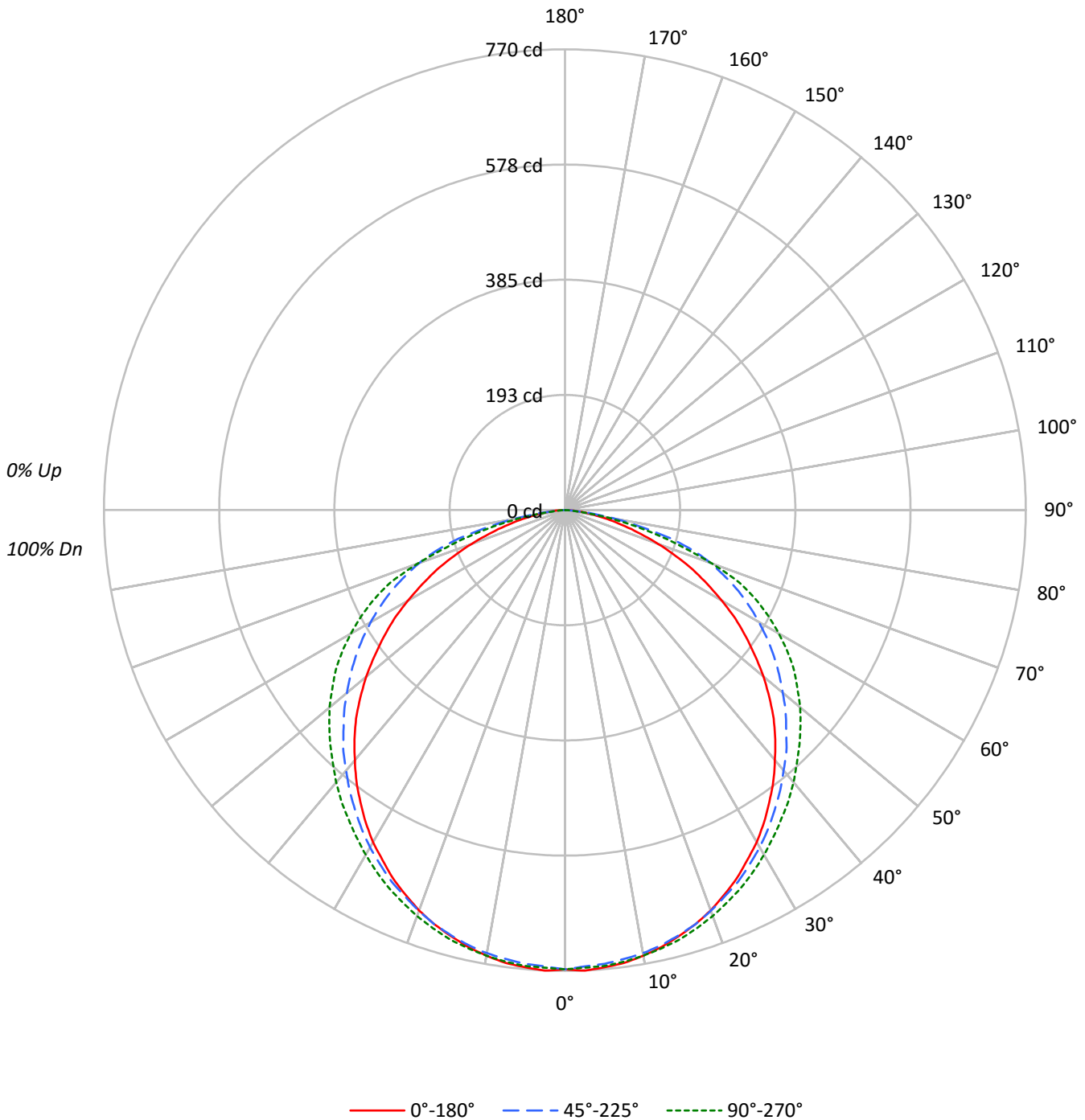
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2065	2065	2065
5°	2071	2056	2066
10°	2066	2055	2066
15°	2053	2049	2069
20°	2039	2041	2068
25°	2017	2034	2068
30°	1992	2023	2067
35°	1956	2008	2071
40°	1917	1997	2087
45°	1877	1990	2109
50°	1812	1990	2148
55°	1734	2000	2194
60°	1629	2016	2222
65°	1502	2036	2236
70°	1308	2041	2057
75°	1079	1899	1663
80°	848	1365	1113
85°	658	528	262



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.7	3.2
10°-20°	208.5	9.2
20°-30°	316.6	14.0
30°-40°	383.7	17.0
40°-50°	404.3	17.9
50°-60°	377.4	16.7
60°-70°	301.6	13.3
70°-80°	166.0	7.3
80°-90°	29.3	1.3
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°	597.8	26.5
0°-40°	981.4	43.4
0°-60°	1763.1	78.0
0°-90°	2260.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2260.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	767	765	761	766	765	73
15°	737	737	736	743	743	208
25°	679	681	685	695	696	313
35°	596	601	611	627	630	373
45°	493	502	523	546	554	379
55°	370	388	426	456	468	330
65°	236	266	320	346	351	232
75°	104	148	183	164	160	112
85°	21	27	17	11	8	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	767.5	767.5	767.5	767.5	767.5
2.5°	770.4	768.2	763.2	767.5	765.4
5°	766.8	764.7	761.1	766.1	764.7
7.5°	763.2	760.4	756.8	762.5	761.1
10°	756.1	754.0	751.9	756.8	756.1
12.5°	747.6	746.9	744.8	750.5	749.7
15°	736.9	736.9	735.5	742.6	742.6
17.5°	725.6	724.9	725.6	733.4	732.7
20°	712.1	712.1	712.8	722.0	722.0
22.5°	695.7	696.4	698.6	709.9	709.2
25°	679.4	680.8	685.1	695.0	696.4
27.5°	659.5	663.0	668.0	680.1	681.5
30°	641.0	643.1	651.0	662.3	665.2
32.5°	619.0	623.2	631.8	644.6	648.1
35°	595.5	601.2	611.2	626.8	630.4
37.5°	572.1	577.1	590.6	606.9	613.3
40°	545.8	554.3	568.5	587.0	594.1
42.5°	520.2	528.7	547.9	567.1	573.5
45°	493.2	502.4	523.0	546.5	554.3
47.5°	463.3	474.0	500.3	525.2	533.7
50°	432.8	446.3	475.4	503.1	513.1
52.5°	400.8	417.9	451.3	480.4	489.6
55°	369.5	388.0	426.4	456.2	467.6
57.5°	337.6	357.5	400.8	434.9	441.3
60°	302.7	326.9	374.5	404.4	412.9
62.5°	268.6	296.3	347.5	375.9	383.0
65°	235.9	265.8	319.8	346.1	351.1
67.5°	200.4	235.9	289.2	313.4	314.8
70°	166.3	207.5	259.4	270.8	261.5
72.5°	132.9	177.0	224.6	215.3	207.5
75°	103.8	148.5	182.6	164.2	159.9
77.5°	76.8	121.5	130.8	120.8	113.0
80°	54.7	95.9	88.1	75.3	71.8
82.5°	37.7	60.4	48.3	37.7	32.7
85°	21.3	27.0	17.1	10.7	8.5
87.5°	9.2	6.4	3.6	2.8	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)