

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: P312833

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-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: P312833
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L83050-CP187-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 3070.0 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

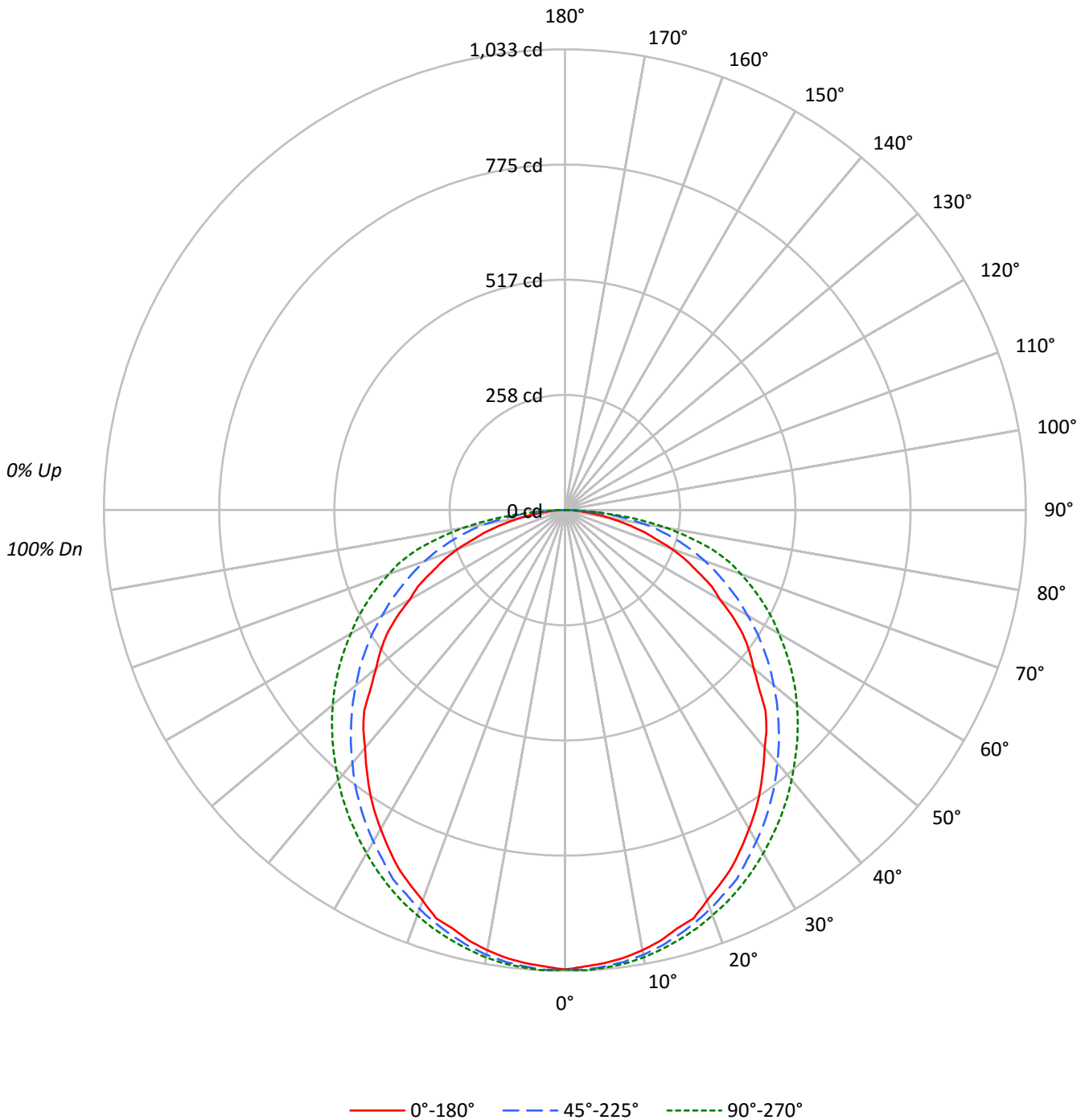
Input Watts (W): 29
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2772	2772	2772
5°	2754	2774	2782
10°	2738	2766	2782
15°	2706	2747	2775
20°	2668	2727	2769
25°	2626	2709	2766
30°	2566	2666	2762
35°	2510	2636	2766
40°	2447	2602	2777
45°	2421	2578	2801
50°	2313	2559	2842
55°	2289	2551	2902
60°	2159	2546	2981
65°	2096	2564	3116
70°	2012	2624	3306
75°	1833	2704	3560
80°	1571	2800	3598
85°	1269	2677	3084



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.5	3.2
10°-20°	278.0	9.1
20°-30°	418.5	13.6
30°-40°	502.2	16.4
40°-50°	524.9	17.1
50°-60°	489.2	15.9
60°-70°	401.2	13.1
70°-80°	270.4	8.8
80°-90°	88.1	2.9
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°	794.0	25.9
0°-40°	1296.2	42.2
0°-60°	2310.3	75.3
0°-90°	3070.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3070.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1030	1030	1030	1030	1030	
5°	1020	1023	1027	1028	1030	97
15°	971	977	986	995	996	274
25°	884	890	912	926	932	407
35°	764	774	802	830	842	478
45°	636	641	677	718	736	486
55°	488	497	544	595	619	432
65°	329	344	403	461	489	327
75°	176	195	260	319	342	185
85°	41	59	87	101	100	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1030.0	1030.0	1030.0	1030.0	1030.0
2.5°	1024.1	1027.1	1031.5	1032.9	1032.9
5°	1019.7	1022.7	1027.1	1028.5	1030.0
7.5°	1012.4	1015.3	1021.2	1024.1	1025.6
10°	1002.1	1005.0	1012.4	1016.8	1018.3
12.5°	988.9	991.8	1000.6	1006.5	1008.0
15°	971.2	977.1	985.9	994.7	996.2
17.5°	959.5	958.0	969.8	980.1	983.0
20°	931.6	938.9	952.1	963.9	966.8
22.5°	908.1	913.9	931.6	944.8	950.7
25°	884.5	890.4	912.5	925.7	931.6
27.5°	855.2	864.0	884.5	903.6	911.0
30°	825.8	834.6	858.1	880.1	889.0
32.5°	796.4	806.7	831.6	855.2	865.4
35°	764.1	774.3	802.3	830.2	841.9
37.5°	730.3	743.5	772.9	803.7	817.0
40°	696.5	709.7	740.6	775.8	790.5
42.5°	668.6	674.4	709.7	747.9	762.6
45°	636.2	640.6	677.4	718.5	736.1
47.5°	589.2	605.4	645.0	690.6	708.2
50°	552.5	570.1	611.2	659.7	678.8
52.5°	521.6	533.4	578.9	627.4	649.5
55°	487.8	496.6	543.7	595.1	618.6
57.5°	446.7	462.8	509.9	562.8	586.3
60°	401.1	421.7	473.1	530.4	553.9
62.5°	371.7	383.5	439.3	496.6	523.1
65°	329.1	343.8	402.6	461.4	489.3
67.5°	293.9	308.6	368.8	427.6	455.5
70°	255.7	270.4	333.5	392.3	420.2
72.5°	211.6	232.2	298.3	357.1	386.4
75°	176.3	195.4	260.1	318.8	342.4
77.5°	136.6	161.6	221.9	270.4	288.0
80°	101.4	126.4	180.7	216.0	232.2
82.5°	69.1	94.0	135.2	161.6	170.4
85°	41.1	58.8	86.7	101.4	99.9
87.5°	19.1	25.0	35.3	35.3	33.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)