

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: P312684

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-RDP-CP187-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: P312684
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
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-RDP-CP187-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 2055.0 lumens
Efficiency: N/A
Efficacy: 70.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

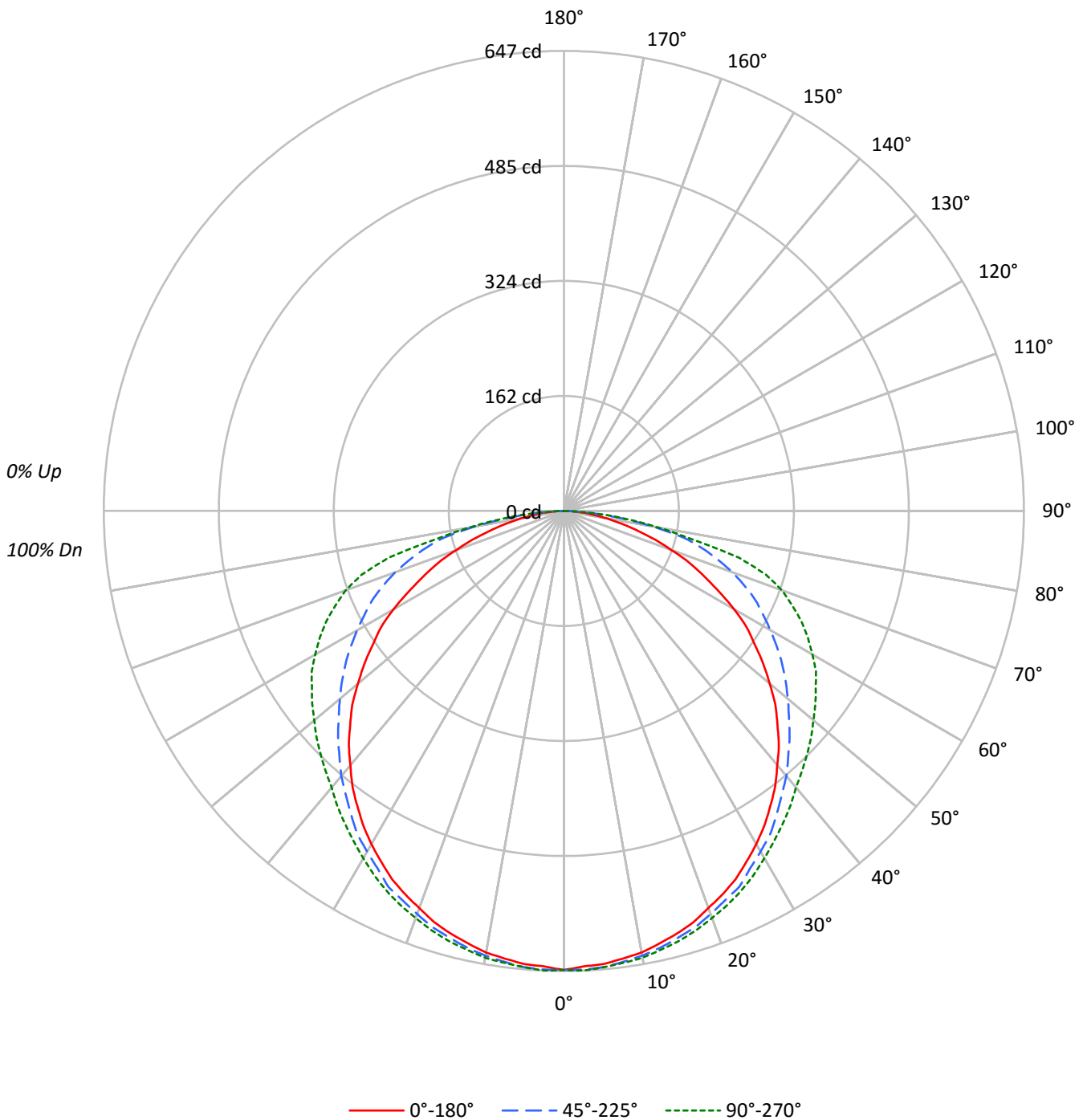
Input Watts (W): 29
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1737	1737	1737
5°	1727	1740	1740
10°	1723	1735	1743
15°	1714	1731	1744
20°	1701	1727	1745
25°	1697	1733	1751
30°	1682	1719	1752
35°	1664	1713	1763
40°	1641	1710	1784
45°	1617	1709	1841
50°	1582	1721	1918
55°	1539	1759	2029
60°	1489	1806	2172
65°	1386	1896	2349
70°	1273	1987	2569
75°	1116	2091	2656
80°	961	1991	2084
85°	840	1448	1587



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	3.0
10°-20°	175.3	8.5
20°-30°	267.5	13.0
30°-40°	326.6	15.9
40°-50°	349.2	17.0
50°-60°	337.1	16.4
60°-70°	290.2	14.1
70°-80°	196.3	9.6
80°-90°	51.8	2.5
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°	503.9	24.5
0°-40°	830.5	40.4
0°-60°	1516.7	73.8
0°-90°	2055.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2055.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	646	646	646	646	646	
5°	640	641	644	644	644	61
15°	615	617	621	624	626	174
25°	571	574	584	587	590	263
35°	506	511	522	532	537	317
45°	425	432	449	472	484	328
55°	328	339	375	413	432	294
65°	218	239	298	345	369	216
75°	107	142	201	242	256	115
85°	27	38	47	48	51	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	645.5	645.5	645.5	645.5	645.5
2.5°	641.0	642.5	645.5	645.5	647.0
5°	639.5	641.0	644.0	644.0	644.0
7.5°	634.9	636.4	639.5	641.0	641.0
10°	630.4	631.9	634.9	636.4	638.0
12.5°	622.8	624.3	628.9	631.9	631.9
15°	615.3	616.8	621.3	624.3	625.9
17.5°	606.2	609.2	613.8	616.8	618.3
20°	594.1	597.1	603.2	607.7	609.2
22.5°	583.5	586.6	592.6	597.1	600.2
25°	571.4	574.5	583.5	586.6	589.6
27.5°	556.3	559.3	566.9	572.9	577.5
30°	541.2	544.2	553.3	560.9	563.9
32.5°	524.6	529.1	539.7	545.7	550.3
35°	506.4	511.0	521.5	532.1	536.7
37.5°	488.3	492.8	503.4	517.0	523.1
40°	467.1	473.2	486.8	504.9	507.9
42.5°	447.5	455.0	467.1	488.3	495.8
45°	424.8	432.4	449.0	471.7	483.8
47.5°	403.6	411.2	429.3	456.5	471.7
50°	377.9	388.5	411.2	442.9	458.1
52.5°	353.7	362.8	393.1	427.8	446.0
55°	328.0	338.6	374.9	412.7	432.4
57.5°	305.4	314.4	355.3	397.6	420.3
60°	276.6	288.7	335.6	381.0	403.6
62.5°	246.4	264.6	316.0	362.8	387.0
65°	217.7	238.9	297.8	344.7	368.9
67.5°	192.0	214.7	275.1	325.0	347.7
70°	161.8	190.5	252.5	300.8	326.5
72.5°	134.5	166.3	226.8	275.1	297.8
75°	107.3	142.1	201.1	241.9	255.5
77.5°	83.1	116.4	172.3	184.4	185.9
80°	62.0	92.2	128.5	130.0	134.5
82.5°	42.3	65.0	83.1	90.7	92.2
85°	27.2	37.8	46.9	48.4	51.4
87.5°	12.1	13.6	16.6	15.1	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)