

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: P312516

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-HRP-CA08-W2A-U-3500K**

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: P312516
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
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-HRP-CA08-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2492.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

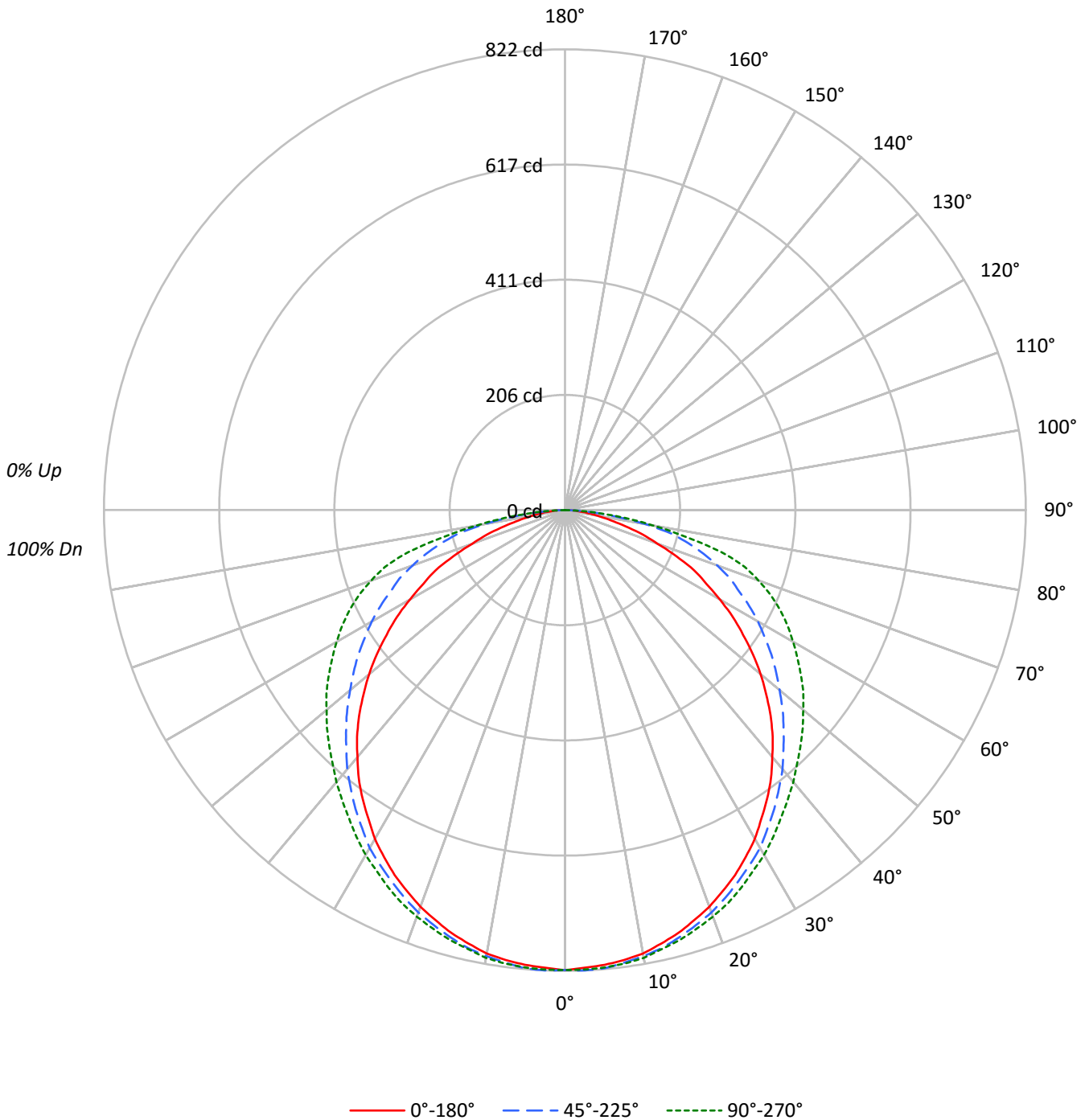
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2208	2208	2208
5°	2200	2217	2212
10°	2195	2208	2217
15°	2177	2198	2212
20°	2156	2188	2210
25°	2133	2170	2208
30°	2105	2164	2208
35°	2066	2138	2205
40°	2021	2121	2225
45°	1974	2100	2261
50°	1909	2093	2323
55°	1822	2109	2411
60°	1717	2140	2530
65°	1622	2182	2702
70°	1386	2275	2894
75°	1160	2370	3007
80°	950	2290	2509
85°	824	1698	1843



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.8	3.1
10°-20°	222.5	8.9
20°-30°	337.2	13.5
30°-40°	407.1	16.3
40°-50°	427.8	17.2
50°-60°	402.5	16.2
60°-70°	335.6	13.5
70°-80°	222.4	8.9
80°-90°	59.3	2.4
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°	637.4	25.6
0°-40°	1044.5	41.9
0°-60°	1874.8	75.2
0°-90°	2492.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2492.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	821	821	821	821	821	
5°	814	816	821	821	819	77
15°	781	784	789	792	794	220
25°	718	723	731	740	744	331
35°	629	635	651	665	671	393
45°	519	527	552	580	594	400
55°	388	406	450	495	514	347
65°	255	277	343	399	424	248
75°	112	156	228	275	289	121
85°	27	41	55	60	60	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	820.6	820.6	820.6	820.6	820.6
2.5°	817.4	819.0	822.2	822.2	820.6
5°	814.3	815.9	820.6	820.6	819.0
7.5°	809.6	811.2	814.3	817.4	815.9
10°	803.3	804.9	808.0	811.2	811.2
12.5°	792.3	793.9	800.2	801.7	801.7
15°	781.3	784.4	789.1	792.3	793.9
17.5°	767.1	770.3	776.6	782.9	782.9
20°	753.0	756.1	764.0	770.3	771.9
22.5°	735.7	740.4	748.3	756.1	759.3
25°	718.4	723.1	731.0	740.4	743.6
27.5°	698.0	702.7	713.7	724.7	726.3
30°	677.5	682.3	696.4	705.8	710.5
32.5°	652.4	658.7	672.8	687.0	691.7
35°	628.8	635.1	650.8	665.0	671.2
37.5°	603.7	609.9	627.2	644.5	652.4
40°	575.4	583.2	603.7	622.5	633.5
42.5°	548.6	556.5	576.9	602.1	613.1
45°	518.8	526.6	551.8	580.1	594.2
47.5°	487.3	496.8	526.6	561.2	575.4
50°	455.9	466.9	499.9	539.2	554.9
52.5°	422.9	437.0	474.7	517.2	536.1
55°	388.3	405.6	449.6	495.2	514.0
57.5°	355.3	371.0	422.9	471.6	492.0
60°	319.1	339.6	397.7	448.0	470.0
62.5°	284.5	306.5	371.0	424.4	448.0
65°	254.7	276.7	342.7	399.3	424.4
67.5°	215.4	245.2	319.1	372.6	397.7
70°	176.1	216.9	289.2	344.3	367.8
72.5°	146.2	185.5	259.4	314.4	336.4
75°	111.6	155.6	227.9	275.1	289.2
77.5°	83.3	128.9	194.9	218.5	220.1
80°	61.3	99.0	147.8	155.6	161.9
82.5°	42.4	69.2	95.9	105.3	108.5
85°	26.7	40.9	55.0	59.7	59.7
87.5°	14.1	15.7	18.9	18.9	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)