

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: P312767

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CA08-W2A-U-4000K**

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: P312767
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: 22FCZ2-24HE-UNV-L83050-CA08-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2305.0 lumens
Efficiency: N/A
Efficacy: 119.4 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

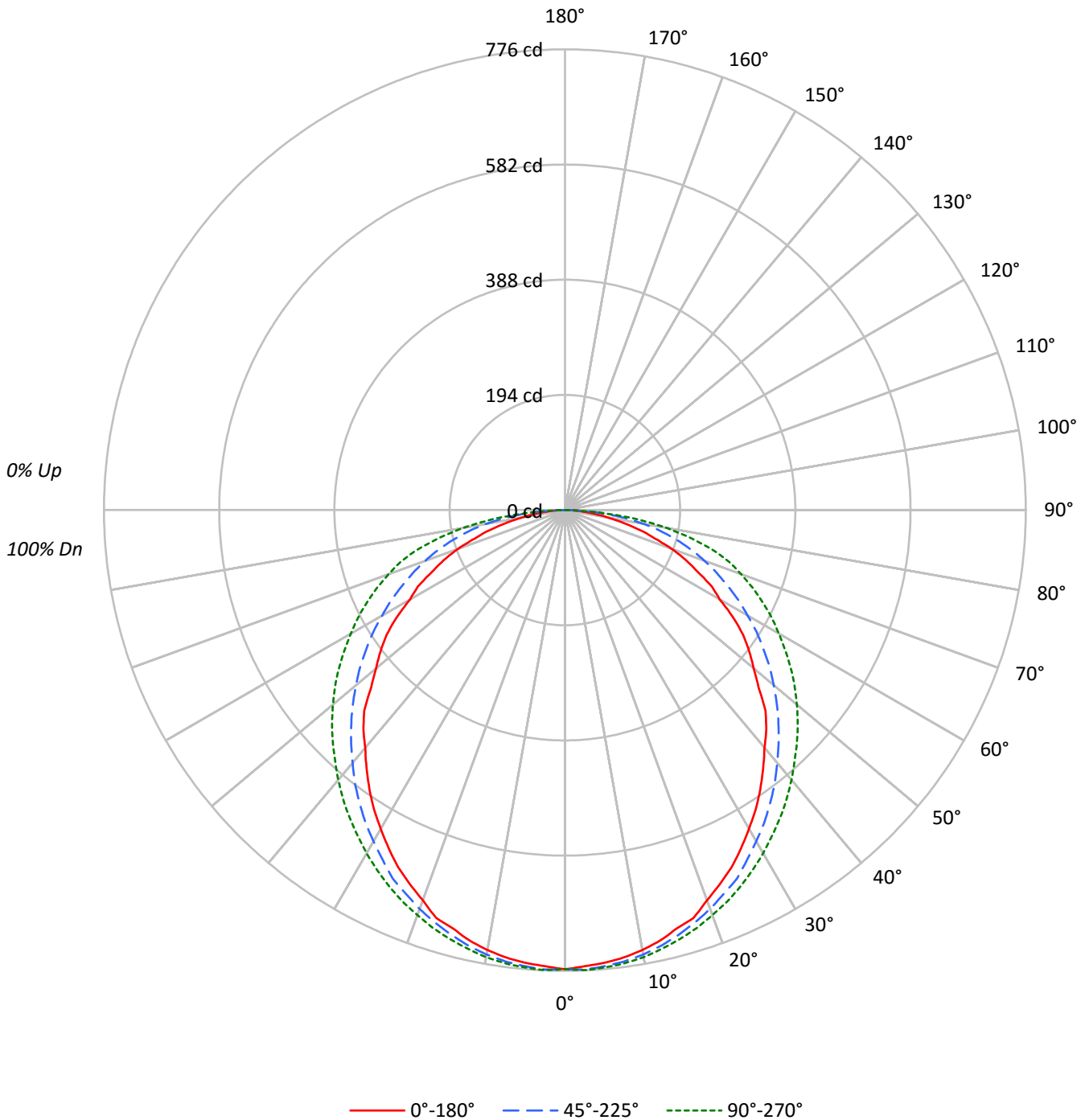
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2081	2081	2081
5°	2068	2083	2089
10°	2056	2077	2089
15°	2031	2062	2084
20°	2003	2047	2079
25°	1972	2034	2077
30°	1927	2002	2074
35°	1885	1979	2076
40°	1837	1953	2085
45°	1818	1936	2103
50°	1737	1921	2134
55°	1719	1915	2179
60°	1621	1912	2238
65°	1573	1925	2339
70°	1511	1970	2482
75°	1377	2031	2672
80°	1179	2103	2701
85°	954	2010	2316



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	3.2
10°-20°	208.8	9.1
20°-30°	314.2	13.6
30°-40°	377.1	16.4
40°-50°	394.1	17.1
50°-60°	367.3	15.9
60°-70°	301.3	13.1
70°-80°	203.0	8.8
80°-90°	66.1	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°	596.1	25.9
0°-40°	973.2	42.2
0°-60°	1734.6	75.3
0°-90°	2305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2305.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	773	773	773	773	773	
5°	766	768	771	772	773	73
15°	729	734	740	747	748	206
25°	664	668	685	695	699	305
35°	574	581	602	623	632	359
45°	478	481	509	540	553	365
55°	366	373	408	447	464	325
65°	247	258	302	346	367	246
75°	132	147	195	239	257	139
85°	31	44	65	76	75	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	773.3	773.3	773.3	773.3	773.3
2.5°	768.9	771.1	774.5	775.6	775.6
5°	765.6	767.8	771.1	772.2	773.3
7.5°	760.1	762.3	766.7	768.9	770.0
10°	752.4	754.6	760.1	763.4	764.5
12.5°	742.5	744.7	751.3	755.7	756.8
15°	729.2	733.6	740.3	746.9	748.0
17.5°	720.4	719.3	728.1	735.8	738.0
20°	699.4	704.9	714.9	723.7	725.9
22.5°	681.8	686.2	699.4	709.4	713.8
25°	664.1	668.5	685.1	695.0	699.4
27.5°	642.1	648.7	664.1	678.5	684.0
30°	620.0	626.6	644.3	660.8	667.4
32.5°	597.9	605.7	624.4	642.1	649.8
35°	573.7	581.4	602.4	623.3	632.1
37.5°	548.3	558.2	580.3	603.5	613.4
40°	522.9	532.8	556.0	582.5	593.5
42.5°	502.0	506.4	532.8	561.5	572.6
45°	477.7	481.0	508.6	539.5	552.7
47.5°	442.4	454.5	484.3	518.5	531.7
50°	414.8	428.0	458.9	495.3	509.7
52.5°	391.6	400.5	434.7	471.1	487.6
55°	366.3	372.9	408.2	446.8	464.4
57.5°	335.4	347.5	382.8	422.5	440.2
60°	301.2	316.6	355.2	398.3	415.9
62.5°	279.1	287.9	329.9	372.9	392.7
65°	247.1	258.2	302.3	346.4	367.4
67.5°	220.6	231.7	276.9	321.0	342.0
70°	192.0	203.0	250.4	294.6	315.5
72.5°	158.9	174.3	224.0	268.1	290.1
75°	132.4	146.7	195.3	239.4	257.0
77.5°	102.6	121.4	166.6	203.0	216.2
80°	76.1	94.9	135.7	162.2	174.3
82.5°	51.9	70.6	101.5	121.4	128.0
85°	30.9	44.1	65.1	76.1	75.0
87.5°	14.3	18.8	26.5	26.5	25.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)