

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: P308722

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-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: P308722  
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: 22FCZ2-29HE-UNV-L82765-CP187-W2A-U-5000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED 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**

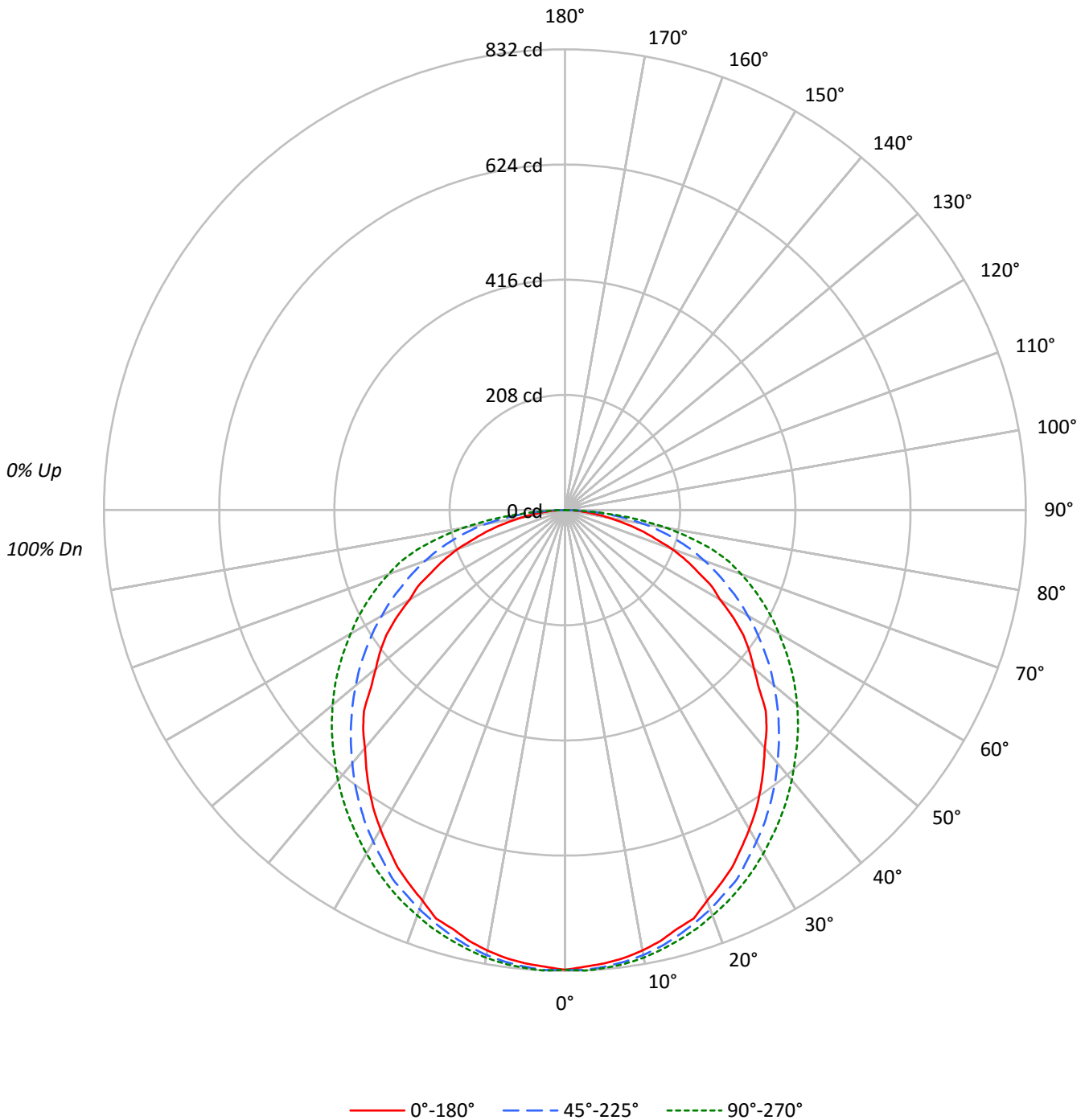
Lumens per Lamp: N/A  
Luminaire Lumens: 2474.0 lumens  
Efficiency: N/A  
Efficacy: 108.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2234	2234	2234
5°	2220	2236	2242
10°	2207	2229	2242
15°	2181	2213	2237
20°	2150	2197	2231
25°	2116	2183	2229
30°	2068	2149	2226
35°	2023	2124	2229
40°	1972	2096	2238
45°	1951	2077	2257
50°	1864	2062	2290
55°	1844	2055	2339
60°	1740	2052	2403
65°	1689	2066	2511
70°	1621	2115	2665
75°	1477	2179	2869
80°	1266	2256	2899
85°	1025	2158	2485



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.5	3.2
10°-20°	224.1	9.1
20°-30°	337.2	13.6
30°-40°	404.7	16.4
40°-50°	423.0	17.1
50°-60°	394.2	15.9
60°-70°	323.3	13.1
70°-80°	217.9	8.8
80°-90°	71.0	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°	639.8	25.9
0°-40°	1044.6	42.2
0°-60°	1861.8	75.3
0°-90°	2474.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2474.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	830	830	830	830	830	
5°	822	824	828	829	830	78
15°	783	787	794	802	803	221
25°	713	718	735	746	751	328
35°	616	624	646	669	678	385
45°	513	516	546	579	593	392
55°	393	400	438	480	498	348
65°	265	277	324	372	394	264
75°	142	158	210	257	276	149
85°	33	47	70	82	80	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	830.0	830.0	830.0	830.0	830.0
2.5°	825.3	827.7	831.2	832.4	832.4
5°	821.8	824.1	827.7	828.9	830.0
7.5°	815.8	818.2	822.9	825.3	826.5
10°	807.6	809.9	815.8	819.4	820.6
12.5°	796.9	799.3	806.4	811.1	812.3
15°	782.7	787.4	794.5	801.6	802.8
17.5°	773.2	772.0	781.5	789.8	792.2
20°	750.7	756.6	767.3	776.8	779.1
22.5°	731.8	736.5	750.7	761.4	766.1
25°	712.8	717.6	735.3	746.0	750.7
27.5°	689.1	696.2	712.8	728.2	734.1
30°	665.5	672.6	691.5	709.3	716.4
32.5°	641.8	650.1	670.2	689.1	697.4
35°	615.7	624.0	646.5	669.0	678.5
37.5°	588.5	599.2	622.8	647.7	658.4
40°	561.3	571.9	596.8	625.2	637.0
42.5°	538.8	543.5	571.9	602.7	614.5
45°	512.7	516.3	545.9	579.0	593.2
47.5°	474.8	487.8	519.8	556.5	570.7
50°	445.2	459.4	492.6	531.7	547.1
52.5°	420.4	429.8	466.5	505.6	523.4
55°	393.1	400.2	438.1	479.6	498.5
57.5°	360.0	373.0	410.9	453.5	472.5
60°	323.3	339.8	381.3	427.5	446.4
62.5°	299.6	309.0	354.0	400.2	421.5
65°	265.2	277.1	324.4	371.8	394.3
67.5°	236.8	248.7	297.2	344.6	367.1
70°	206.0	217.9	268.8	316.2	338.7
72.5°	170.5	187.1	240.4	287.7	311.4
75°	142.1	157.5	209.6	256.9	275.9
77.5°	110.1	130.3	178.8	217.9	232.1
80°	81.7	101.8	145.6	174.1	187.1
82.5°	55.7	75.8	108.9	130.3	137.4
85°	33.2	47.4	69.9	81.7	80.5
87.5°	15.4	20.1	28.4	28.4	27.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)