

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: P309147

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-CA08-W2A-U-5700K**

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: P309147  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-30HE-UNV-L82765-HRP-CA08-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET  
Light Source: (336) 5700K 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**

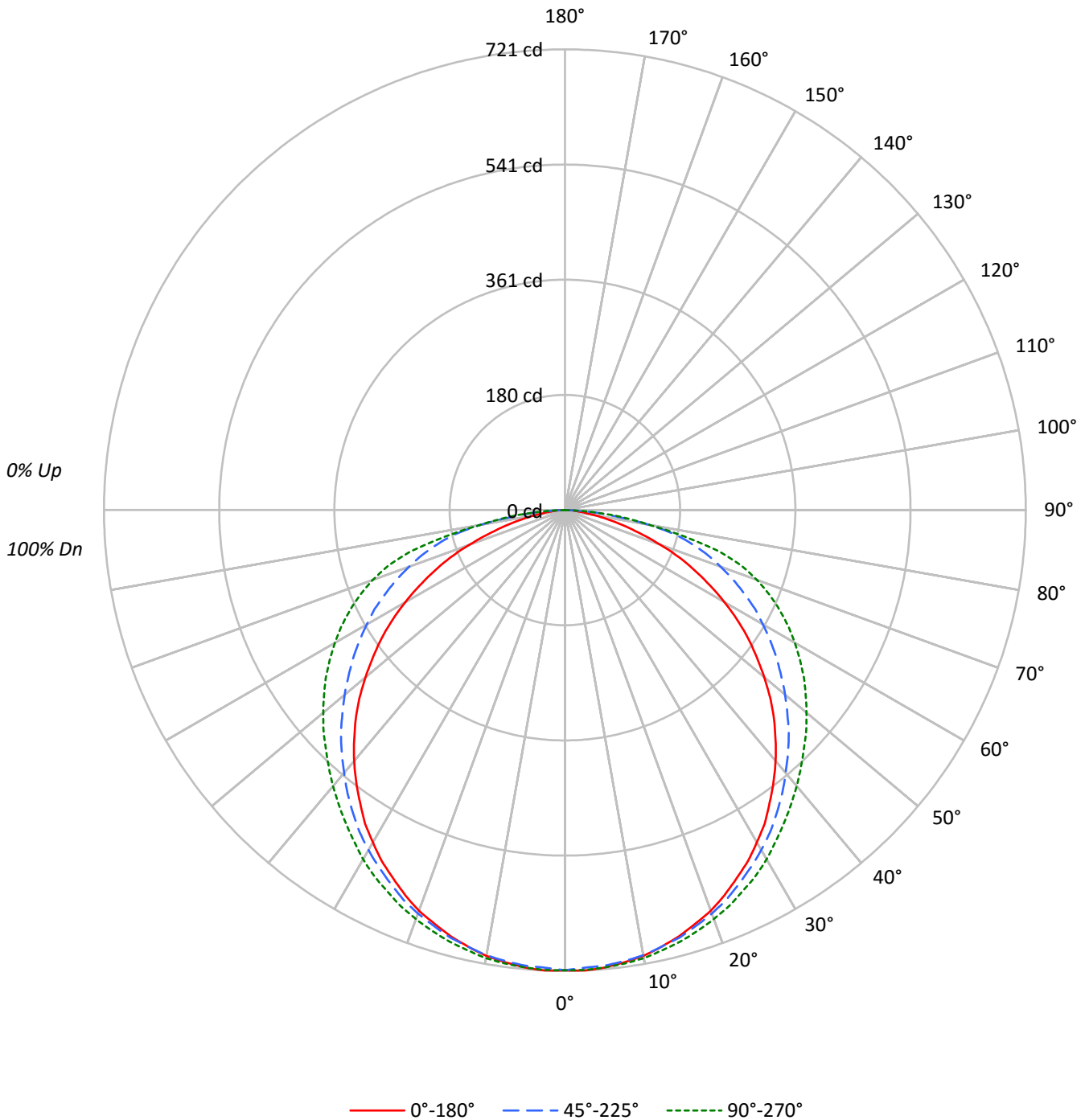
Lumens per Lamp: N/A  
Luminaire Lumens: 2220.0 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 21.7  
Input Voltage (V): NR  
Input Current (A<sub>in</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	101	96	93	96	93	90	92	90	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	969	969	969
5°	970	967	970
10°	968	966	973
15°	962	964	974
20°	955	962	975
25°	944	958	977
30°	933	954	981
35°	918	950	982
40°	901	944	991
45°	881	943	1006
50°	852	942	1033
55°	822	948	1070
60°	775	963	1118
65°	716	985	1181
70°	625	1020	1258
75°	507	1072	1300
80°	374	1051	1051
85°	287	775	875



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.2	3.1
10°-20°	195.9	8.8
20°-30°	298.3	13.4
30°-40°	362.2	16.3
40°-50°	382.7	17.2
50°-60°	361.1	16.3
60°-70°	300.2	13.5
70°-80°	197.5	8.9
80°-90°	53.8	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°	562.5	25.3
0°-40°	924.7	41.7
0°-60°	1668.4	75.2
0°-90°	2220.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2220.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	720	720	720	720	720	
5°	718	718	716	718	718	68
15°	690	692	692	699	699	195
25°	636	639	645	656	658	293
35°	559	565	578	593	598	350
45°	463	472	495	520	529	356
55°	350	365	404	442	456	312
65°	225	251	310	355	371	222
75°	98	142	206	244	250	105
85°	19	41	50	56	57	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	720.3	720.3	720.3	720.3	720.3
2.5°	721.2	720.3	716.6	720.3	720.3
5°	718.4	718.4	715.6	718.4	718.4
7.5°	713.8	713.8	711.9	715.6	715.6
10°	708.2	708.2	707.3	711.9	711.9
12.5°	699.8	700.8	699.8	705.4	705.4
15°	690.5	691.5	692.4	698.9	698.9
17.5°	678.5	680.3	682.2	689.6	690.5
20°	667.3	668.2	672.0	680.3	681.2
22.5°	652.4	655.2	659.9	668.2	671.0
25°	635.7	639.4	645.0	656.2	658.0
27.5°	619.9	622.7	630.1	642.2	645.9
30°	600.4	605.0	614.3	626.4	631.1
32.5°	581.8	586.4	597.6	610.6	614.3
35°	558.6	565.1	578.1	593.0	597.6
37.5°	536.3	542.8	558.6	575.3	580.9
40°	513.0	520.5	537.2	556.7	564.1
42.5°	487.9	498.2	516.7	538.1	546.5
45°	462.8	472.1	495.4	519.5	528.8
47.5°	435.9	447.0	472.1	500.9	512.1
50°	407.1	421.0	449.8	481.4	493.5
52.5°	378.3	394.1	426.6	461.9	474.9
55°	350.4	365.3	404.3	442.4	456.3
57.5°	319.7	338.3	381.1	421.9	435.9
60°	288.1	308.6	357.8	400.6	415.4
62.5°	256.5	279.7	335.5	378.3	394.1
65°	224.9	250.9	309.5	355.0	370.8
67.5°	194.2	223.1	285.3	330.9	346.7
70°	158.9	195.2	259.3	303.9	319.7
72.5°	126.4	168.2	234.2	276.0	290.0
75°	97.6	142.2	206.3	244.4	250.0
77.5°	71.6	116.2	177.5	190.5	191.5
80°	48.3	92.9	135.7	133.8	135.7
82.5°	31.6	69.7	85.5	95.7	96.7
85°	18.6	40.9	50.2	55.8	56.7
87.5°	9.3	13.9	17.7	18.6	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)