

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: P308222

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P308222
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-L82765-HRP-CP187-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2064.0 lumens
Efficiency: N/A
Efficacy: 74.8 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

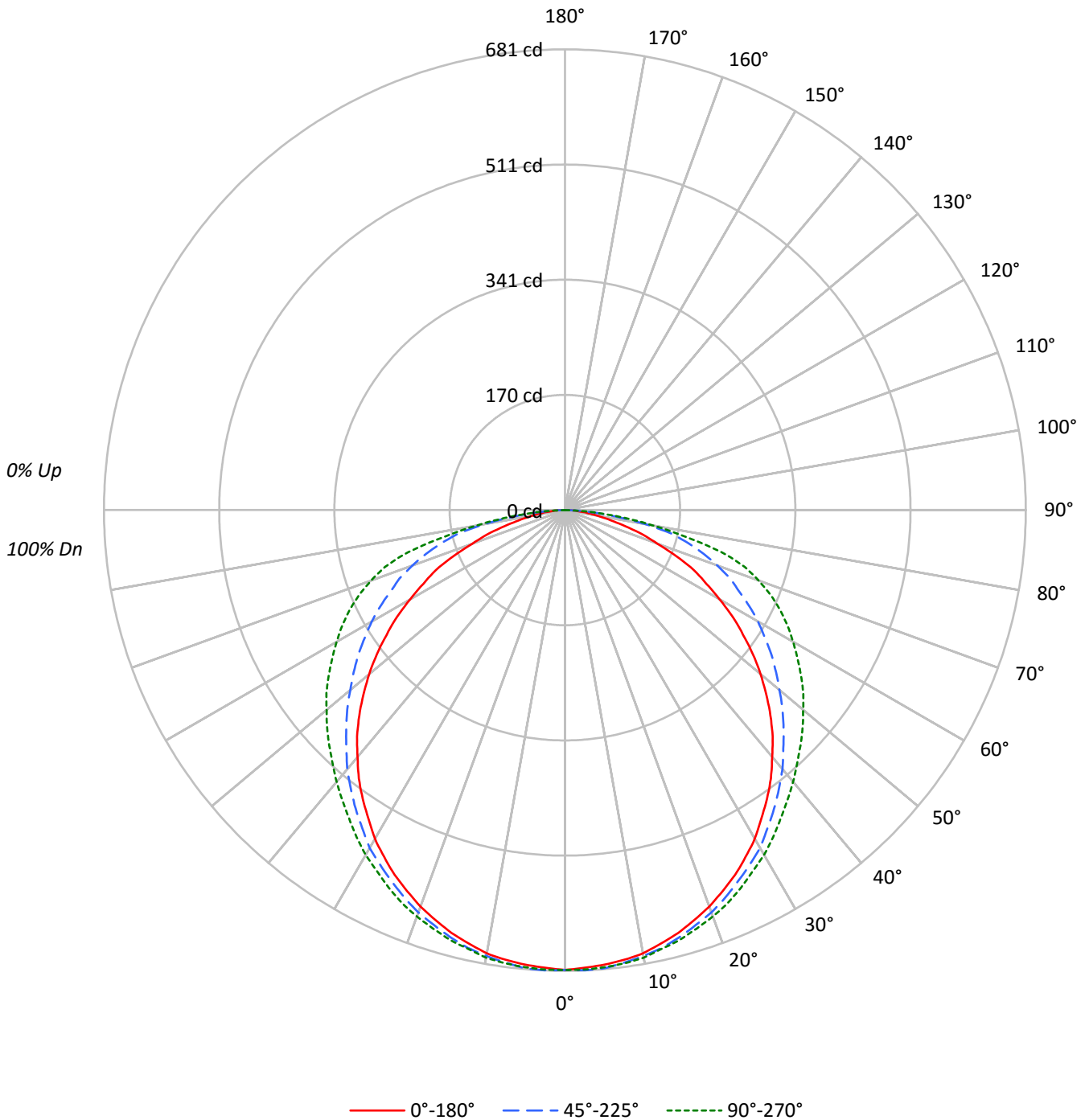
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82					82			
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68					68			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56					56			
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36					36			
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31					31			
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1829	1829	1829
5°	1822	1836	1832
10°	1818	1829	1836
15°	1803	1821	1832
20°	1786	1812	1831
25°	1767	1798	1829
30°	1744	1792	1829
35°	1711	1771	1827
40°	1674	1756	1843
45°	1635	1739	1873
50°	1581	1733	1924
55°	1509	1747	1998
60°	1422	1773	2095
65°	1343	1807	2238
70°	1147	1885	2397
75°	961	1963	2491
80°	787	1897	2078
85°	682	1408	1528



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.4	3.1
10°-20°	184.3	8.9
20°-30°	279.2	13.5
30°-40°	337.2	16.3
40°-50°	354.3	17.2
50°-60°	333.4	16.2
60°-70°	278.0	13.5
70°-80°	184.2	8.9
80°-90°	49.1	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°	527.9	25.6
0°-40°	865.1	41.9
0°-60°	1552.8	75.2
0°-90°	2064.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2064.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	674	676	680	680	678	64
15°	647	650	654	656	658	182
25°	595	599	605	613	616	274
35°	521	526	539	551	556	326
45°	430	436	457	480	492	331
55°	322	336	372	410	426	288
65°	211	229	284	331	352	205
75°	92	129	189	228	240	100
85°	22	34	46	50	50	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	679.7	679.7	679.7	679.7	679.7
2.5°	677.0	678.3	681.0	681.0	679.7
5°	674.4	675.7	679.7	679.7	678.3
7.5°	670.5	671.8	674.4	677.0	675.7
10°	665.3	666.6	669.2	671.8	671.8
12.5°	656.2	657.5	662.7	664.0	664.0
15°	647.1	649.7	653.6	656.2	657.5
17.5°	635.4	638.0	643.2	648.4	648.4
20°	623.7	626.3	632.8	638.0	639.3
22.5°	609.3	613.2	619.8	626.3	628.9
25°	595.0	598.9	605.4	613.2	615.9
27.5°	578.1	582.0	591.1	600.2	601.5
30°	561.2	565.1	576.8	584.6	588.5
32.5°	540.3	545.5	557.3	569.0	572.9
35°	520.8	526.0	539.0	550.8	556.0
37.5°	500.0	505.2	519.5	533.8	540.3
40°	476.5	483.0	500.0	515.6	524.7
42.5°	454.4	460.9	477.8	498.7	507.8
45°	429.7	436.2	457.0	480.4	492.2
47.5°	403.6	411.4	436.2	464.8	476.5
50°	377.6	386.7	414.0	446.6	459.6
52.5°	350.2	362.0	393.2	428.4	444.0
55°	321.6	335.9	372.4	410.1	425.8
57.5°	294.3	307.3	350.2	390.6	407.5
60°	264.3	281.2	329.4	371.1	389.3
62.5°	235.7	253.9	307.3	351.5	371.1
65°	210.9	229.2	283.8	330.7	351.5
67.5°	178.4	203.1	264.3	308.6	329.4
70°	145.8	179.7	239.6	285.1	304.7
72.5°	121.1	153.6	214.8	260.4	278.6
75°	92.4	128.9	188.8	227.9	239.6
77.5°	69.0	106.8	161.4	181.0	182.3
80°	50.8	82.0	122.4	128.9	134.1
82.5°	35.2	57.3	79.4	87.2	89.8
85°	22.1	33.9	45.6	49.5	49.5
87.5°	11.7	13.0	15.6	15.6	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)