

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: P308228

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-CP187-W2A-U-5500K**

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: P308228
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-5500K
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: 2339.0 lumens
Efficiency: N/A
Efficacy: 82.4 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

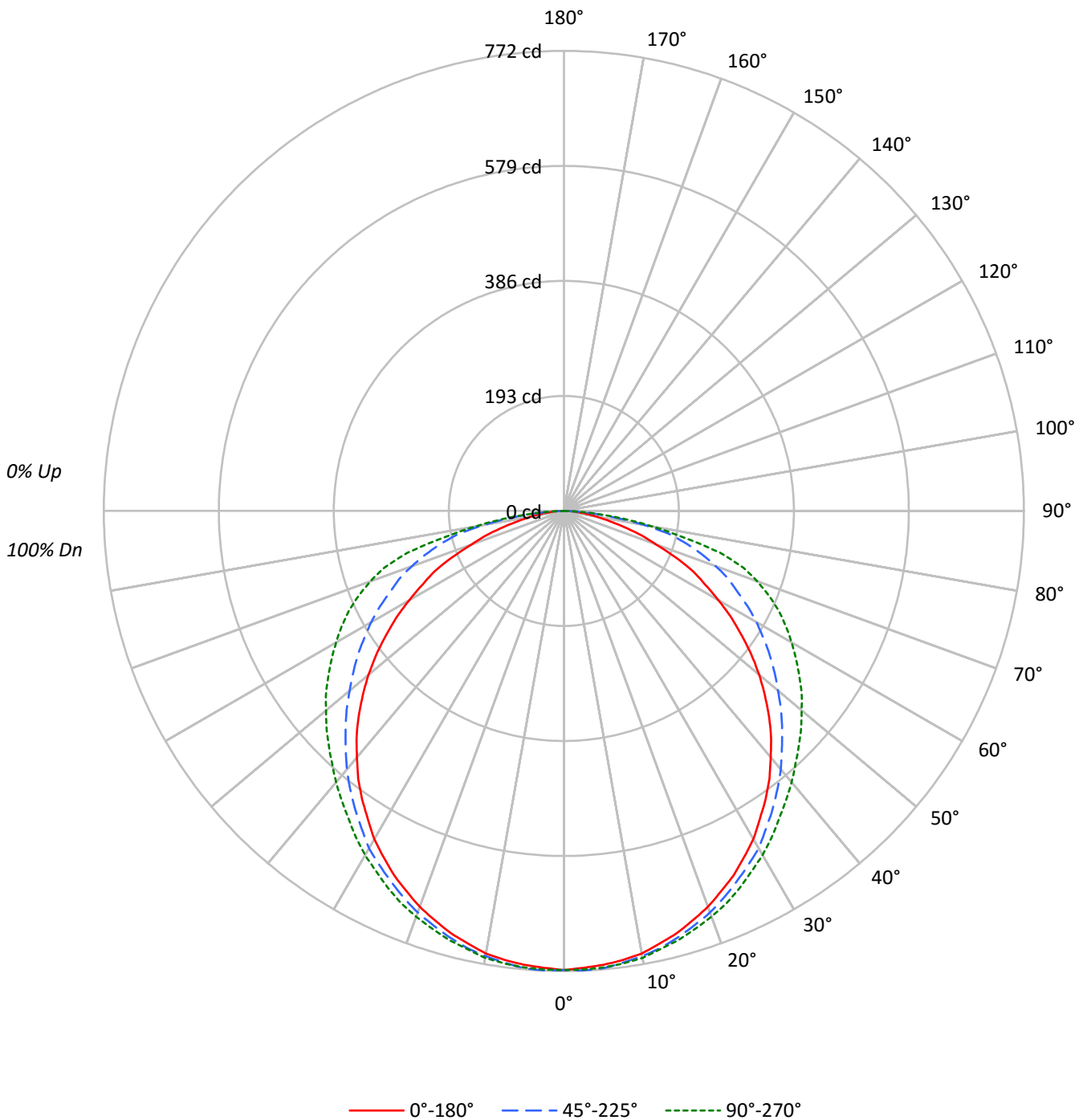
Input Watts (W): 28.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2073	2073	2073
5°	2065	2081	2076
10°	2060	2072	2081
15°	2043	2064	2076
20°	2024	2054	2075
25°	2002	2037	2072
30°	1976	2031	2072
35°	1939	2007	2070
40°	1897	1990	2089
45°	1853	1971	2122
50°	1791	1964	2180
55°	1710	1980	2264
60°	1612	2009	2375
65°	1522	2048	2537
70°	1301	2136	2717
75°	1090	2224	2823
80°	891	2149	2356
85°	775	1593	1732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.0	3.1
10°-20°	208.8	8.9
20°-30°	316.5	13.5
30°-40°	382.1	16.3
40°-50°	401.5	17.2
50°-60°	377.8	16.2
60°-70°	315.0	13.5
70°-80°	208.7	8.9
80°-90°	55.6	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°	598.3	25.6
0°-40°	980.4	41.9
0°-60°	1759.7	75.2
0°-90°	2339.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2339.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	770	770	770	770	770	
5°	764	766	770	770	769	73
15°	733	736	741	744	745	207
25°	674	679	686	695	698	310
35°	590	596	611	624	630	369
45°	487	494	518	544	558	375
55°	364	381	422	465	482	326
65°	239	260	322	375	398	233
75°	105	146	214	258	272	114
85°	25	38	52	56	56	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	770.2	770.2	770.2	770.2	770.2
2.5°	767.3	768.7	771.7	771.7	770.2
5°	764.3	765.8	770.2	770.2	768.7
7.5°	759.9	761.4	764.3	767.3	765.8
10°	754.0	755.5	758.4	761.4	761.4
12.5°	743.6	745.1	751.0	752.5	752.5
15°	733.3	736.3	740.7	743.6	745.1
17.5°	720.0	723.0	728.9	734.8	734.8
20°	706.8	709.7	717.1	723.0	724.5
22.5°	690.5	695.0	702.3	709.7	712.7
25°	674.3	678.7	686.1	695.0	697.9
27.5°	655.1	659.5	669.9	680.2	681.7
30°	635.9	640.4	653.6	662.5	666.9
32.5°	612.3	618.2	631.5	644.8	649.2
35°	590.2	596.1	610.9	624.1	630.0
37.5°	566.6	572.5	588.7	605.0	612.3
40°	540.0	547.4	566.6	584.3	594.6
42.5°	514.9	522.3	541.5	565.1	575.4
45°	486.9	494.3	517.9	544.5	557.7
47.5°	457.4	466.3	494.3	526.8	540.0
50°	427.9	438.2	469.2	506.1	520.8
52.5°	396.9	410.2	445.6	485.4	503.1
55°	364.4	380.7	422.0	464.8	482.5
57.5°	333.5	348.2	396.9	442.6	461.8
60°	299.5	318.7	373.3	420.5	441.2
62.5°	267.1	287.7	348.2	398.4	420.5
65°	239.0	259.7	321.7	374.8	398.4
67.5°	202.1	230.2	299.5	349.7	373.3
70°	165.3	203.6	271.5	323.1	345.3
72.5°	137.2	174.1	243.5	295.1	315.8
75°	104.8	146.1	213.9	258.2	271.5
77.5°	78.2	121.0	183.0	205.1	206.6
80°	57.5	93.0	138.7	146.1	152.0
82.5°	39.8	64.9	90.0	98.9	101.8
85°	25.1	38.4	51.6	56.1	56.1
87.5°	13.3	14.8	17.7	17.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)