

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: P308227

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-HRP-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: P308227
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-5000K
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: 2316.0 lumens
Efficiency: N/A
Efficacy: 82.1 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

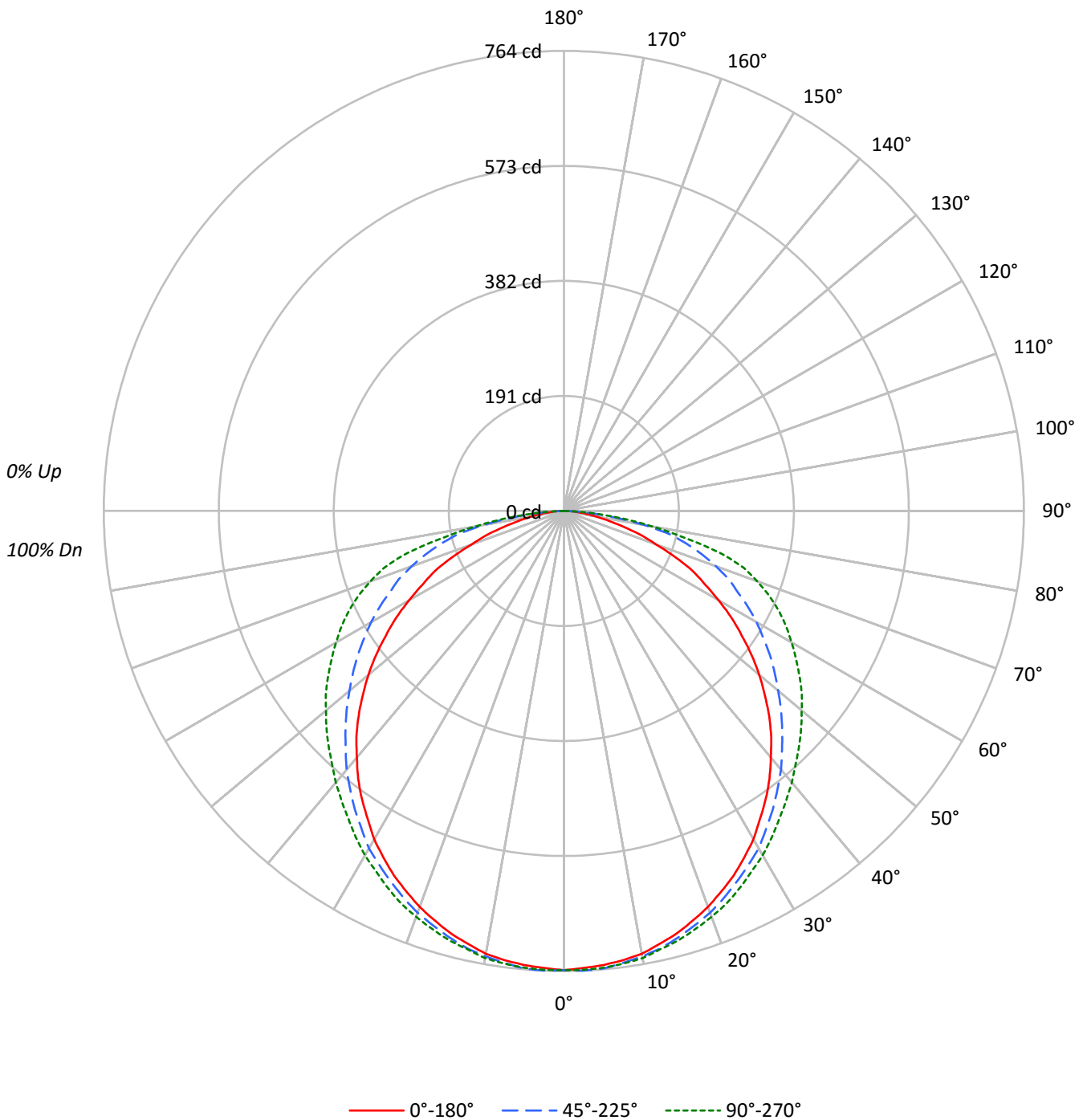
Input Watts (W): 28.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2052	2052	2052
5°	2044	2060	2056
10°	2040	2052	2060
15°	2023	2043	2055
20°	2004	2033	2054
25°	1983	2017	2052
30°	1957	2011	2052
35°	1920	1987	2049
40°	1878	1971	2068
45°	1835	1952	2102
50°	1774	1945	2159
55°	1693	1960	2241
60°	1596	1989	2351
65°	1507	2028	2512
70°	1287	2115	2690
75°	1078	2202	2795
80°	883	2128	2332
85°	766	1578	1714



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	3.1
10°-20°	206.8	8.9
20°-30°	313.3	13.5
30°-40°	378.4	16.3
40°-50°	397.6	17.2
50°-60°	374.1	16.2
60°-70°	311.9	13.5
70°-80°	206.7	8.9
80°-90°	55.1	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°	592.4	25.6
0°-40°	970.7	41.9
0°-60°	1742.4	75.2
0°-90°	2316.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2316.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	763	763	763	763	763	
5°	757	758	763	763	761	72
15°	726	729	733	736	738	205
25°	668	672	679	688	691	307
35°	584	590	605	618	624	365
45°	482	489	513	539	552	371
55°	361	377	418	460	478	323
65°	237	257	318	371	394	230
75°	104	145	212	256	269	113
85°	25	38	51	56	56	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	762.6	762.6	762.6	762.6	762.6
2.5°	759.7	761.2	764.1	764.1	762.6
5°	756.8	758.2	762.6	762.6	761.2
7.5°	752.4	753.9	756.8	759.7	758.2
10°	746.6	748.0	750.9	753.9	753.9
12.5°	736.3	737.8	743.6	745.1	745.1
15°	726.1	729.0	733.4	736.3	737.8
17.5°	713.0	715.9	721.7	727.6	727.6
20°	699.8	702.7	710.0	715.9	717.3
22.5°	683.7	688.1	695.4	702.7	705.7
25°	667.7	672.1	679.4	688.1	691.0
27.5°	648.7	653.1	663.3	673.5	675.0
30°	629.7	634.1	647.2	656.0	660.4
32.5°	606.3	612.2	625.3	638.4	642.8
35°	584.4	590.2	604.8	618.0	623.8
37.5°	561.0	566.9	582.9	599.0	606.3
40°	534.7	542.0	561.0	578.5	588.8
42.5°	509.9	517.2	536.2	559.6	569.8
45°	482.1	489.4	512.8	539.1	552.3
47.5°	452.9	461.7	489.4	521.6	534.7
50°	423.7	433.9	464.6	501.1	515.7
52.5°	393.0	406.2	441.2	480.7	498.2
55°	360.9	376.9	417.8	460.2	477.7
57.5°	330.2	344.8	393.0	438.3	457.3
60°	296.6	315.6	369.6	416.4	436.8
62.5°	264.4	284.9	344.8	394.5	416.4
65°	236.7	257.1	318.5	371.1	394.5
67.5°	200.2	227.9	296.6	346.3	369.6
70°	163.6	201.6	268.8	320.0	341.9
72.5°	135.9	172.4	241.1	292.2	312.7
75°	103.7	144.6	211.8	255.7	268.8
77.5°	77.4	119.8	181.2	203.1	204.5
80°	57.0	92.0	137.3	144.6	150.5
82.5°	39.4	64.3	89.1	97.9	100.8
85°	24.8	38.0	51.1	55.5	55.5
87.5°	13.1	14.6	17.5	17.5	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)