

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: P308719

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CP187-W2A-U-3500K**

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: P308719
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-3500K
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: 2346.0 lumens
Efficiency: N/A
Efficacy: 104.3 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

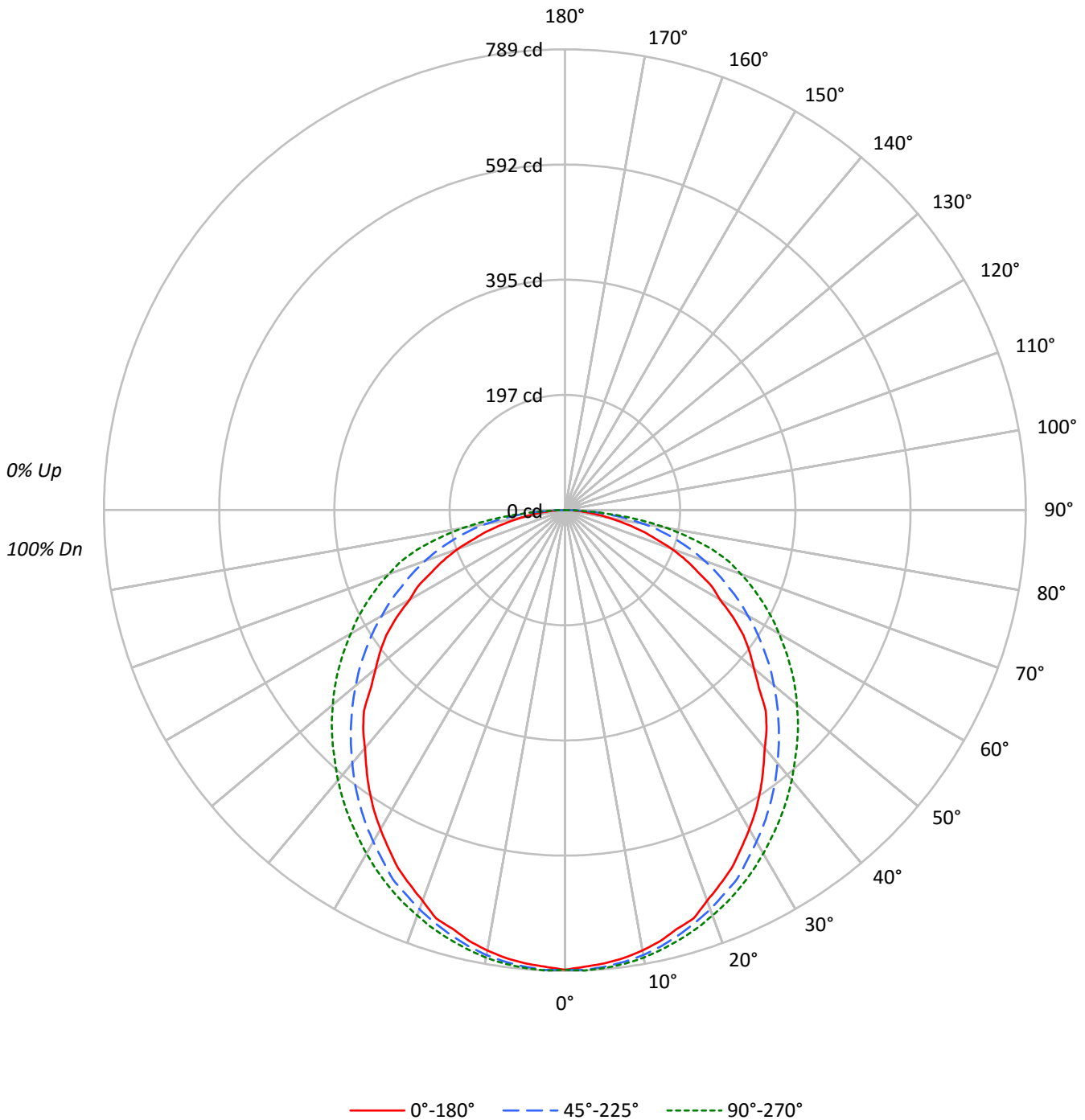
Input Watts (W): 22.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2118	2118	2118
5°	2105	2120	2126
10°	2093	2114	2126
15°	2068	2099	2121
20°	2039	2084	2116
25°	2007	2070	2114
30°	1961	2037	2111
35°	1918	2014	2114
40°	1870	1988	2122
45°	1850	1970	2141
50°	1768	1955	2171
55°	1749	1949	2218
60°	1650	1946	2278
65°	1601	1959	2381
70°	1537	2006	2526
75°	1400	2066	2720
80°	1201	2140	2749
85°	969	2044	2359



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.5	3.2
10°-20°	212.5	9.1
20°-30°	319.8	13.6
30°-40°	383.8	16.4
40°-50°	401.1	17.1
50°-60°	373.8	15.9
60°-70°	306.6	13.1
70°-80°	206.6	8.8
80°-90°	67.3	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°	606.7	25.9
0°-40°	990.5	42.2
0°-60°	1765.5	75.3
0°-90°	2346.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2346.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	787	787	787	787	787	
5°	779	782	785	786	787	74
15°	742	747	753	760	761	210
25°	676	680	697	707	712	311
35°	584	592	613	634	643	365
45°	486	490	518	549	562	371
55°	373	380	415	455	473	330
65°	252	263	308	353	374	250
75°	135	149	199	244	262	142
85°	31	45	66	78	76	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	787.1	787.1	787.1	787.1	787.1
2.5°	782.6	784.9	788.2	789.3	789.3
5°	779.2	781.5	784.9	786.0	787.1
7.5°	773.6	775.9	780.4	782.6	783.7
10°	765.8	768.0	773.6	777.0	778.1
12.5°	755.7	757.9	764.6	769.1	770.3
15°	742.2	746.7	753.4	760.2	761.3
17.5°	733.2	732.1	741.1	748.9	751.2
20°	711.9	717.5	727.6	736.6	738.8
22.5°	693.9	698.4	711.9	722.0	726.5
25°	675.9	680.4	697.3	707.4	711.9
27.5°	653.5	660.2	675.9	690.5	696.2
30°	631.0	637.8	655.7	672.6	679.3
32.5°	608.6	616.4	635.5	653.5	661.3
35°	583.9	591.7	613.1	634.4	643.4
37.5°	558.0	568.2	590.6	614.2	624.3
40°	532.2	542.3	565.9	592.9	604.1
42.5°	510.9	515.4	542.3	571.5	582.7
45°	486.2	489.6	517.6	549.1	562.5
47.5°	450.3	462.6	492.9	527.7	541.2
50°	422.2	435.7	467.1	504.2	518.7
52.5°	398.6	407.6	442.4	479.4	496.3
55°	372.8	379.5	415.4	454.7	472.7
57.5°	341.3	353.7	389.6	430.0	448.0
60°	306.5	322.3	361.6	405.3	423.3
62.5°	284.1	293.1	335.7	379.5	399.7
65°	251.5	262.7	307.7	352.6	373.9
67.5°	224.6	235.8	281.8	326.7	348.1
70°	195.4	206.6	254.9	299.8	321.1
72.5°	161.7	177.4	227.9	272.8	295.3
75°	134.7	149.3	198.7	243.7	261.6
77.5°	104.4	123.5	169.5	206.6	220.1
80°	77.5	96.6	138.1	165.1	177.4
82.5°	52.8	71.9	103.3	123.5	130.2
85°	31.4	44.9	66.2	77.5	76.4
87.5°	14.6	19.1	26.9	26.9	25.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)