

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: P308179

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-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: P308179
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: 22FCZ2-29HE-UNV-L82765-HRP-CP187-W2A-U-3500K
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: 1822.9 lumens
Efficiency: N/A
Efficacy: 81.0 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

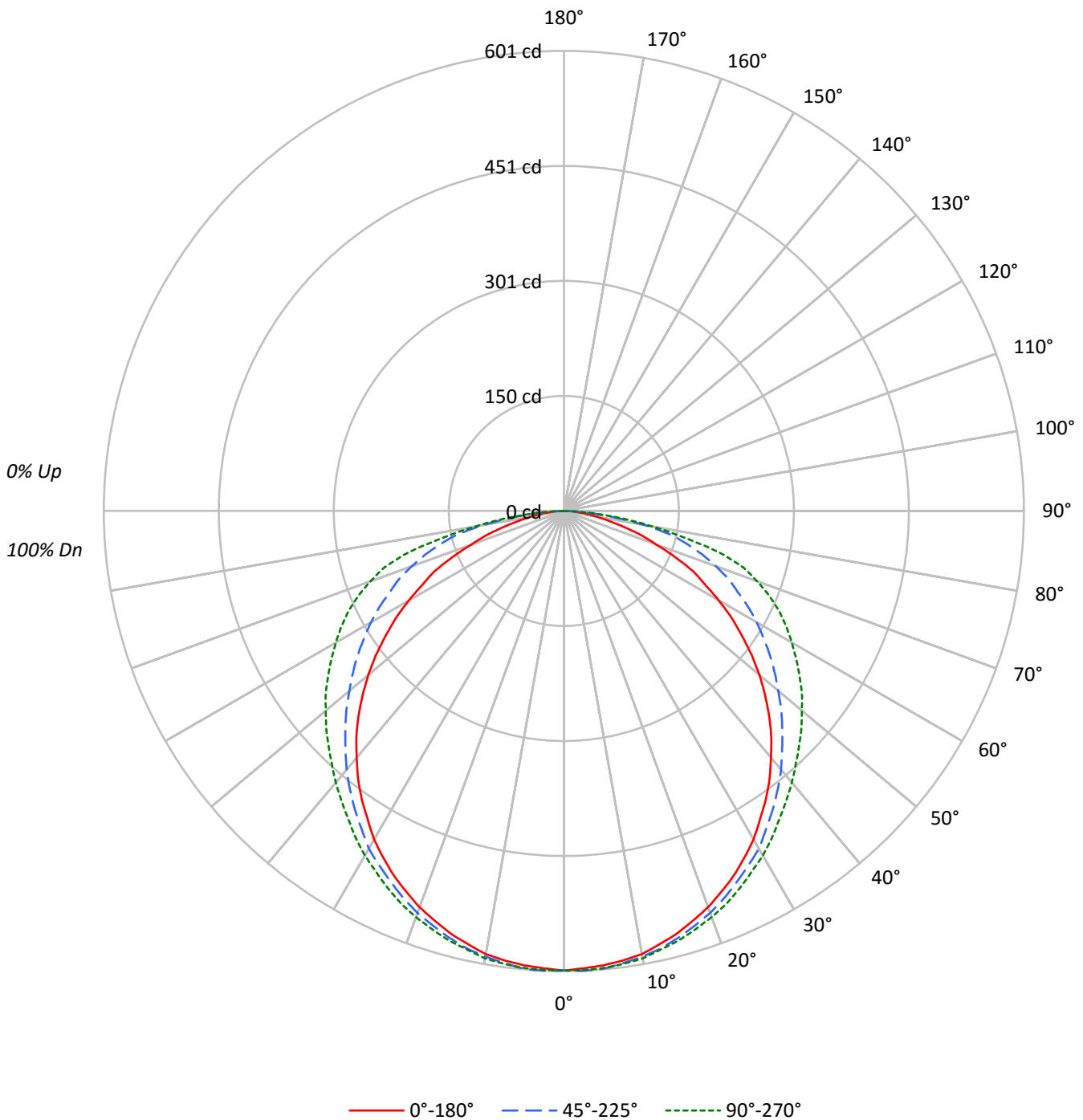
Input Watts (W): 22.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1615	1615	1615
5°	1609	1622	1618
10°	1606	1615	1621
15°	1592	1608	1618
20°	1577	1601	1617
25°	1560	1588	1615
30°	1540	1583	1615
35°	1511	1564	1613
40°	1479	1551	1628
45°	1444	1536	1654
50°	1396	1531	1699
55°	1332	1543	1764
60°	1256	1566	1850
65°	1186	1596	1977
70°	1013	1665	2117
75°	848	1733	2200
80°	694	1675	1835
85°	602	1241	1349



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.9	3.1
10°-20°	162.7	8.9
20°-30°	246.6	13.5
30°-40°	297.8	16.3
40°-50°	312.9	17.2
50°-60°	294.4	16.2
60°-70°	245.5	13.5
70°-80°	162.6	8.9
80°-90°	43.3	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°	466.3	25.6
0°-40°	764.1	41.9
0°-60°	1371.4	75.2
0°-90°	1822.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1822.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	600	600	600	600	600	
5°	596	597	600	600	599	57
15°	572	574	577	580	581	161
25°	526	529	535	542	544	242
35°	460	465	476	486	491	288
45°	380	385	404	424	435	292
55°	284	297	329	362	376	254
65°	186	202	251	292	310	181
75°	82	114	167	201	212	89
85°	20	30	40	44	44	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	600.3	600.3	600.3	600.3	600.3
2.5°	598.0	599.1	601.4	601.4	600.3
5°	595.7	596.8	600.3	600.3	599.1
7.5°	592.2	593.4	595.7	598.0	596.8
10°	587.6	588.8	591.1	593.4	593.4
12.5°	579.6	580.7	585.3	586.5	586.5
15°	571.5	573.8	577.3	579.6	580.7
17.5°	561.2	563.5	568.1	572.7	572.7
20°	550.8	553.1	558.9	563.5	564.6
22.5°	538.2	541.6	547.4	553.1	555.4
25°	525.5	529.0	534.7	541.6	543.9
27.5°	510.6	514.0	522.1	530.1	531.3
30°	495.6	499.1	509.4	516.3	519.8
32.5°	477.2	481.8	492.2	502.5	506.0
35°	460.0	464.6	476.1	486.4	491.0
37.5°	441.6	446.2	458.8	471.5	477.2
40°	420.9	426.6	441.6	455.4	463.4
42.5°	401.3	407.1	422.0	440.4	448.5
45°	379.5	385.2	403.6	424.3	434.7
47.5°	356.5	363.4	385.2	410.5	420.9
50°	333.5	341.5	365.7	394.4	405.9
52.5°	309.3	319.7	347.3	378.3	392.1
55°	284.0	296.7	328.9	362.2	376.0
57.5°	259.9	271.4	309.3	345.0	359.9
60°	233.4	248.4	290.9	327.7	343.8
62.5°	208.1	224.2	271.4	310.5	327.7
65°	186.3	202.4	250.7	292.1	310.5
67.5°	157.5	179.4	233.4	272.5	290.9
70°	128.8	158.7	211.6	251.8	269.1
72.5°	106.9	135.7	189.7	230.0	246.1
75°	81.6	113.8	166.7	201.2	211.6
77.5°	60.9	94.3	142.6	159.8	161.0
80°	44.8	72.4	108.1	113.8	118.4
82.5°	31.0	50.6	70.1	77.0	79.3
85°	19.5	29.9	40.2	43.7	43.7
87.5°	10.3	11.5	13.8	13.8	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)