

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: P308156

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CA08-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: P308156
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-CA08-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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: 2074.0 lumens
Efficiency: N/A
Efficacy: 90.2 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

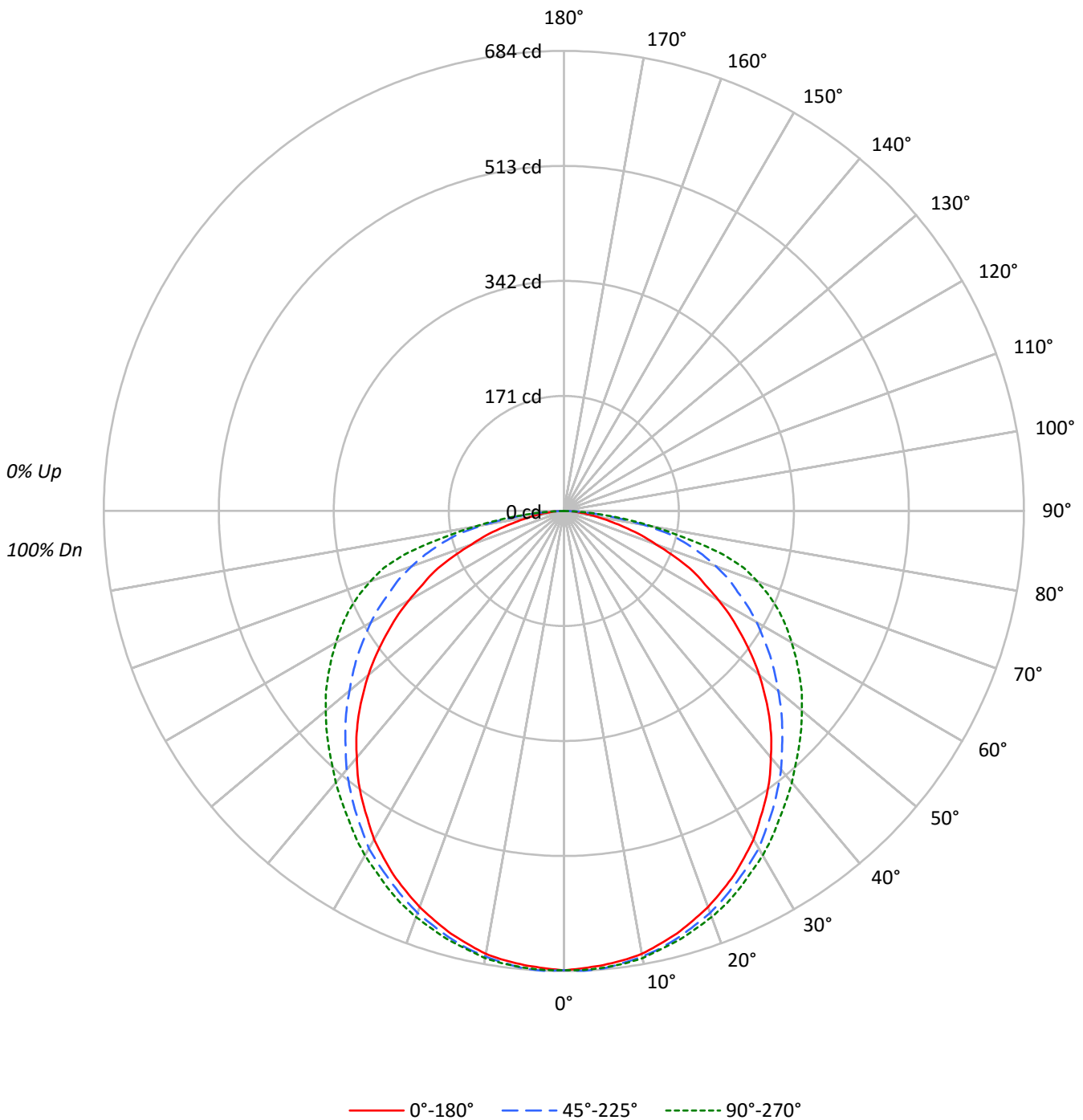
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1838	1838	1838
5°	1831	1845	1841
10°	1827	1838	1845
15°	1811	1830	1841
20°	1795	1821	1840
25°	1775	1806	1837
30°	1752	1801	1838
35°	1719	1779	1835
40°	1682	1765	1852
45°	1643	1748	1882
50°	1588	1742	1933
55°	1516	1756	2007
60°	1429	1781	2105
65°	1349	1816	2249
70°	1153	1894	2408
75°	966	1972	2503
80°	790	1906	2089
85°	685	1414	1535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	3.1
10°-20°	185.1	8.9
20°-30°	280.6	13.5
30°-40°	338.8	16.3
40°-50°	356.0	17.2
50°-60°	335.0	16.2
60°-70°	279.3	13.5
70°-80°	185.1	8.9
80°-90°	49.3	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°	530.5	25.6
0°-40°	869.3	41.9
0°-60°	1560.3	75.2
0°-90°	2074.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2074.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	683	683	683	683	683	
5°	678	679	683	683	682	64
15°	650	653	657	659	661	183
25°	598	602	608	616	619	275
35°	523	529	542	553	559	327
45°	432	438	459	483	494	333
55°	323	338	374	412	428	289
65°	212	230	285	332	353	206
75°	93	130	190	229	241	101
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°	682.9	682.9	682.9	682.9	682.9
2.5°	680.3	681.6	684.3	684.3	682.9
5°	677.7	679.0	682.9	682.9	681.6
7.5°	673.8	675.1	677.7	680.3	679.0
10°	668.6	669.9	672.5	675.1	675.1
12.5°	659.4	660.7	665.9	667.2	667.2
15°	650.2	652.9	656.8	659.4	660.7
17.5°	638.5	641.1	646.3	651.5	651.5
20°	626.7	629.3	635.8	641.1	642.4
22.5°	612.3	616.2	622.8	629.3	631.9
25°	597.9	601.8	608.4	616.2	618.8
27.5°	580.9	584.8	594.0	603.1	604.4
30°	563.9	567.8	579.6	587.4	591.4
32.5°	543.0	548.2	560.0	571.7	575.7
35°	523.3	528.6	541.6	553.4	558.7
37.5°	502.4	507.6	522.0	536.4	543.0
40°	478.8	485.4	502.4	518.1	527.3
42.5°	456.6	463.1	480.2	501.1	510.2
45°	431.7	438.3	459.2	482.8	494.5
47.5°	405.6	413.4	438.3	467.1	478.8
50°	379.4	388.6	416.0	448.8	461.8
52.5°	351.9	363.7	395.1	430.4	446.1
55°	323.2	337.5	374.2	412.1	427.8
57.5°	295.7	308.8	351.9	392.5	409.5
60°	265.6	282.6	331.0	372.9	391.2
62.5°	236.8	255.1	308.8	353.2	372.9
65°	211.9	230.3	285.2	332.3	353.2
67.5°	179.2	204.1	265.6	310.1	331.0
70°	146.5	180.5	240.7	286.5	306.1
72.5°	121.7	154.4	215.9	261.7	280.0
75°	92.9	129.5	189.7	229.0	240.7
77.5°	69.3	107.3	162.2	181.9	183.2
80°	51.0	82.4	123.0	129.5	134.8
82.5°	35.3	57.6	79.8	87.7	90.3
85°	22.2	34.0	45.8	49.7	49.7
87.5°	11.8	13.1	15.7	15.7	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)