

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: P308153

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-4000K**

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: P308153
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-4000K
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: 1991.0 lumens
Efficiency: N/A
Efficacy: 87.7 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

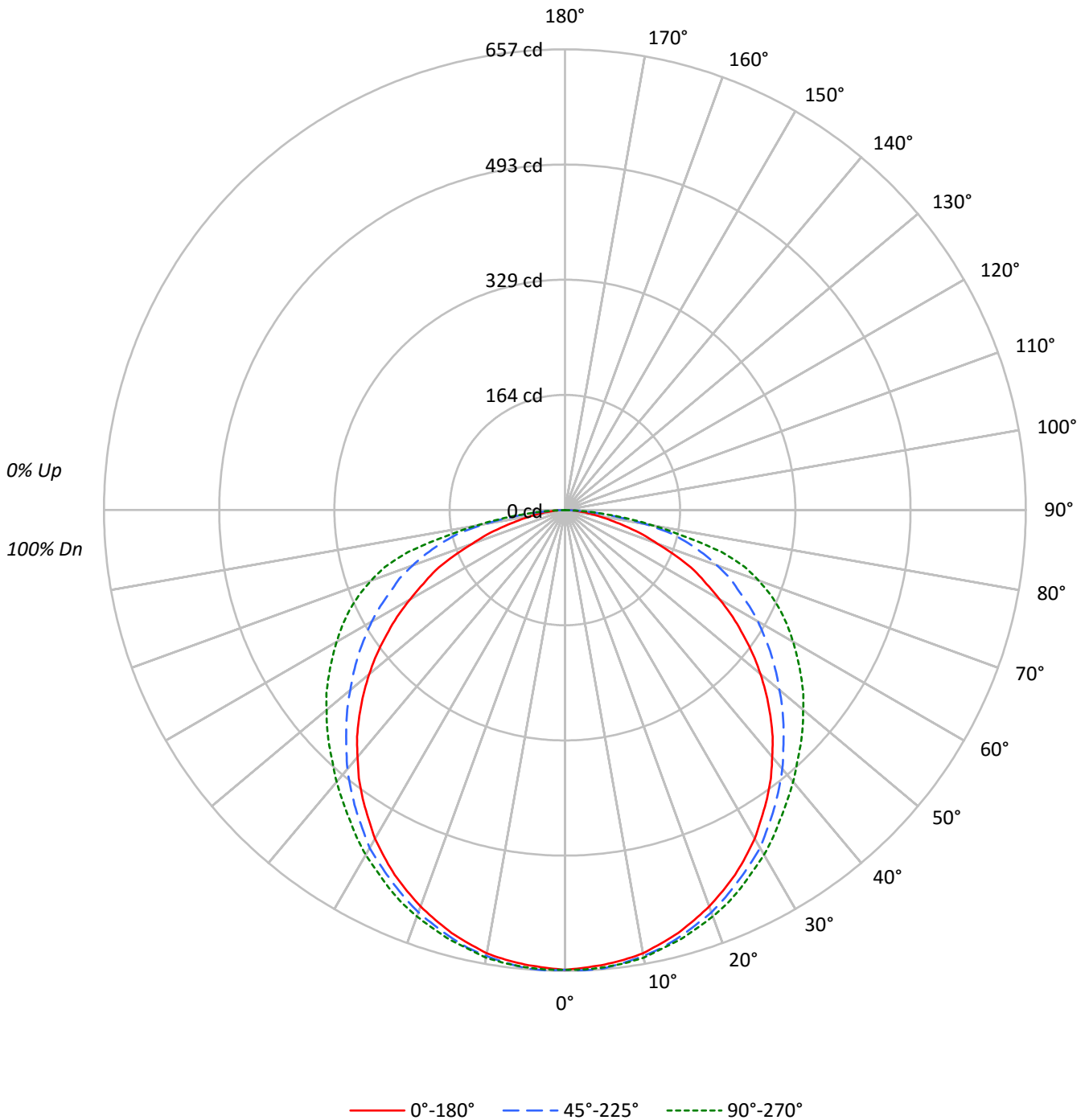
Input Watts (W): 22.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1764	1764	1764
5°	1757	1771	1768
10°	1754	1764	1771
15°	1739	1757	1767
20°	1723	1748	1766
25°	1704	1734	1764
30°	1682	1729	1764
35°	1650	1708	1762
40°	1615	1694	1778
45°	1577	1678	1807
50°	1525	1672	1856
55°	1455	1685	1927
60°	1372	1710	2021
65°	1296	1743	2159
70°	1107	1818	2312
75°	927	1893	2403
80°	759	1830	2005
85°	661	1359	1473



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.1	3.1
10°-20°	177.7	8.9
20°-30°	269.4	13.5
30°-40°	325.3	16.3
40°-50°	341.8	17.2
50°-60°	321.6	16.2
60°-70°	268.1	13.5
70°-80°	177.7	8.9
80°-90°	47.4	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°	509.2	25.6
0°-40°	834.5	41.9
0°-60°	1497.9	75.2
0°-90°	1991.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1991.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	656	656	656	656	656	
5°	651	652	656	656	654	62
15°	624	627	630	633	634	176
25°	574	578	584	592	594	264
35°	502	507	520	531	536	314
45°	414	421	441	464	475	319
55°	310	324	359	396	411	278
65°	204	221	274	319	339	198
75°	89	124	182	220	231	97
85°	21	33	44	48	48	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	655.6	655.6	655.6	655.6	655.6
2.5°	653.1	654.4	656.9	656.9	655.6
5°	650.6	651.8	655.6	655.6	654.4
7.5°	646.8	648.1	650.6	653.1	651.8
10°	641.8	643.1	645.6	648.1	648.1
12.5°	633.0	634.3	639.3	640.5	640.5
15°	624.2	626.7	630.5	633.0	634.3
17.5°	612.9	615.4	620.4	625.5	625.5
20°	601.6	604.1	610.4	615.4	616.7
22.5°	587.8	591.6	597.8	604.1	606.6
25°	574.0	577.7	584.0	591.6	594.1
27.5°	557.6	561.4	570.2	579.0	580.3
30°	541.3	545.1	556.4	563.9	567.7
32.5°	521.2	526.2	537.6	548.9	552.6
35°	502.4	507.4	520.0	531.3	536.3
37.5°	482.3	487.3	501.1	514.9	521.2
40°	459.7	466.0	482.3	497.4	506.2
42.5°	438.3	444.6	460.9	481.0	489.8
45°	414.5	420.7	440.8	463.5	474.8
47.5°	389.3	396.9	420.7	448.4	459.7
50°	364.2	373.0	399.4	430.8	443.4
52.5°	337.9	349.2	379.3	413.2	428.3
55°	310.2	324.0	359.2	395.6	410.7
57.5°	283.8	296.4	337.9	376.8	393.1
60°	255.0	271.3	317.8	358.0	375.5
62.5°	227.3	244.9	296.4	339.1	358.0
65°	203.5	221.0	273.8	319.0	339.1
67.5°	172.1	195.9	255.0	297.7	317.8
70°	140.7	173.3	231.1	275.1	293.9
72.5°	116.8	148.2	207.2	251.2	268.8
75°	89.2	124.3	182.1	219.8	231.1
77.5°	66.6	103.0	155.7	174.6	175.8
80°	49.0	79.1	118.1	124.3	129.4
82.5°	33.9	55.3	76.6	84.1	86.7
85°	21.4	32.7	44.0	47.7	47.7
87.5°	11.3	12.6	15.1	15.1	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)