

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: P308158

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-6500K**

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: P308158
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-6500K
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: 2084.0 lumens
Efficiency: N/A
Efficacy: 89.1 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

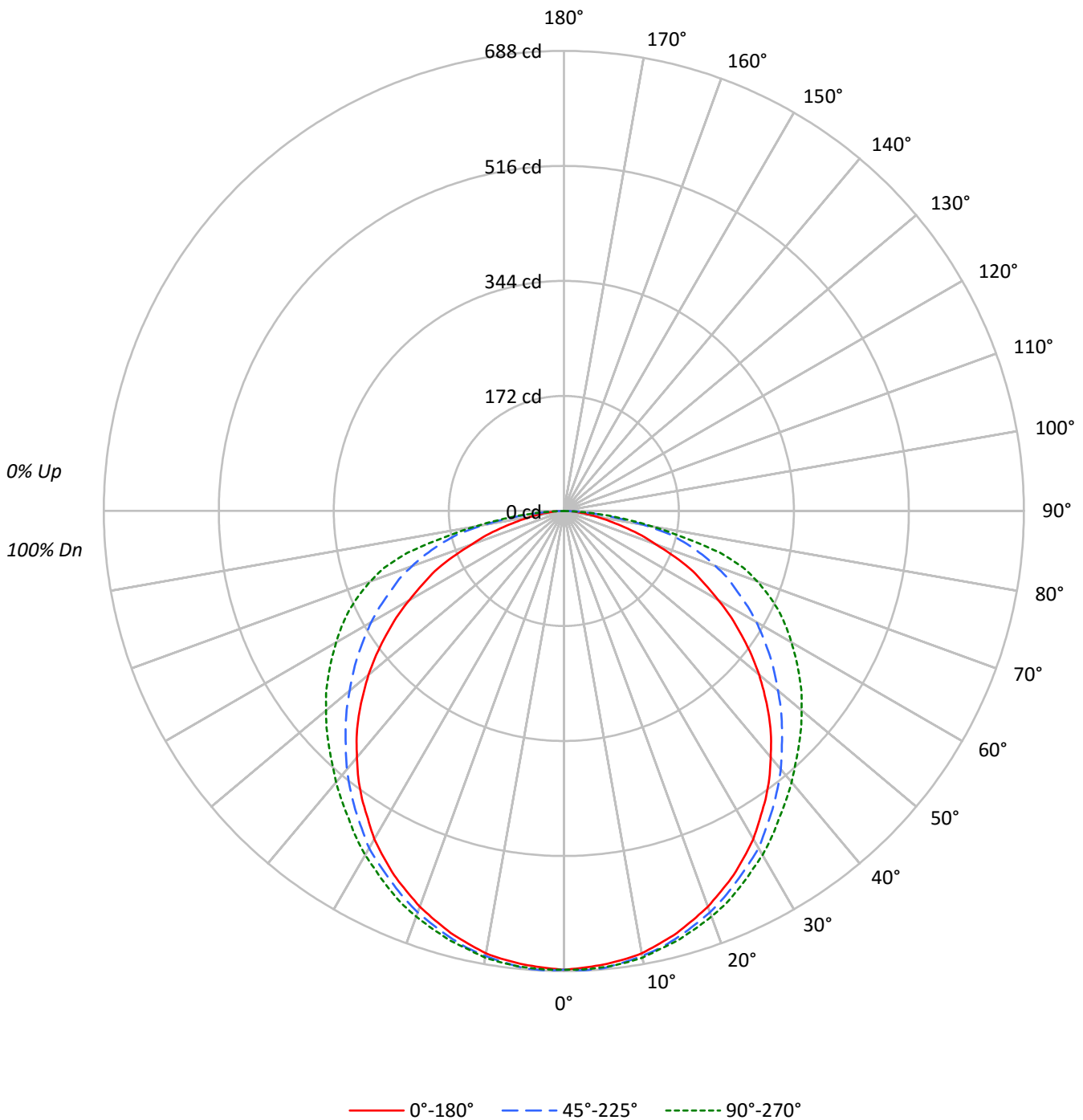
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308158

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P308158

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-6500K

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°	1847	1847	1847
5°	1840	1854	1850
10°	1836	1846	1853
15°	1820	1838	1850
20°	1803	1830	1849
25°	1784	1815	1846
30°	1761	1810	1846
35°	1728	1788	1844
40°	1690	1773	1861
45°	1651	1756	1891
50°	1596	1750	1943
55°	1523	1764	2017
60°	1436	1790	2116
65°	1356	1825	2260
70°	1158	1903	2420
75°	970	1982	2515
80°	795	1915	2098
85°	689	1420	1544



TEST NUMBER: P308158

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-HRP-CA08-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.0	3.1
10°-20°	186.0	8.9
20°-30°	281.9	13.5
30°-40°	340.5	16.3
40°-50°	357.7	17.2
50°-60°	336.6	16.2
60°-70°	280.7	13.5
70°-80°	185.9	8.9
80°-90°	49.6	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°	533.0	25.6
0°-40°	873.5	41.9
0°-60°	1567.8	75.2
0°-90°	2084.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2084.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	681	682	686	686	685	65
15°	653	656	660	663	664	184
25°	601	605	611	619	622	277
35°	526	531	544	556	561	329
45°	434	440	461	485	497	334
55°	325	339	376	414	430	290
65°	213	231	287	334	355	207
75°	93	130	191	230	242	101
85°	22	34	46	50	50	26
90°	0	0	0	0	0	



TEST NUMBER: P308158

CATALOG NUMBER: 22FC22-29HE-UNV-L82765-HRP-CA08-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	686.2	686.2	686.2	686.2	686.2
2.5°	683.6	684.9	687.6	687.6	686.2
5°	681.0	682.3	686.2	686.2	684.9
7.5°	677.0	678.3	681.0	683.6	682.3
10°	671.8	673.1	675.7	678.3	678.3
12.5°	662.6	663.9	669.1	670.5	670.5
15°	653.4	656.0	659.9	662.6	663.9
17.5°	641.5	644.2	649.4	654.7	654.7
20°	629.7	632.3	638.9	644.2	645.5
22.5°	615.2	619.2	625.8	632.3	635.0
25°	600.8	604.7	611.3	619.2	621.8
27.5°	583.7	587.6	596.8	606.0	607.4
30°	566.6	570.6	582.4	590.3	594.2
32.5°	545.6	550.8	562.7	574.5	578.4
35°	525.9	531.1	544.3	556.1	561.3
37.5°	504.8	510.1	524.5	539.0	545.6
40°	481.2	487.7	504.8	520.6	529.8
42.5°	458.8	465.4	482.5	503.5	512.7
45°	433.8	440.4	461.4	485.1	496.9
47.5°	407.5	415.4	440.4	469.3	481.2
50°	381.2	390.4	418.1	450.9	464.1
52.5°	353.6	365.5	397.0	432.5	448.3
55°	324.7	339.2	376.0	414.1	429.9
57.5°	297.1	310.3	353.6	394.4	411.5
60°	266.9	284.0	332.6	374.7	393.1
62.5°	237.9	256.4	310.3	355.0	374.7
65°	213.0	231.4	286.6	333.9	355.0
67.5°	180.1	205.1	266.9	311.6	332.6
70°	147.2	181.4	241.9	287.9	307.6
72.5°	122.3	155.1	216.9	262.9	281.3
75°	93.3	130.1	190.6	230.1	241.9
77.5°	69.7	107.8	163.0	182.7	184.0
80°	51.3	82.8	123.6	130.1	135.4
82.5°	35.5	57.8	80.2	88.1	90.7
85°	22.3	34.2	46.0	50.0	50.0
87.5°	11.8	13.1	15.8	15.8	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)