

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: P308871

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CA08-W2A-U-3000K**

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: P308871
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L82765-S-CA08-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH 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: 1937.0 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

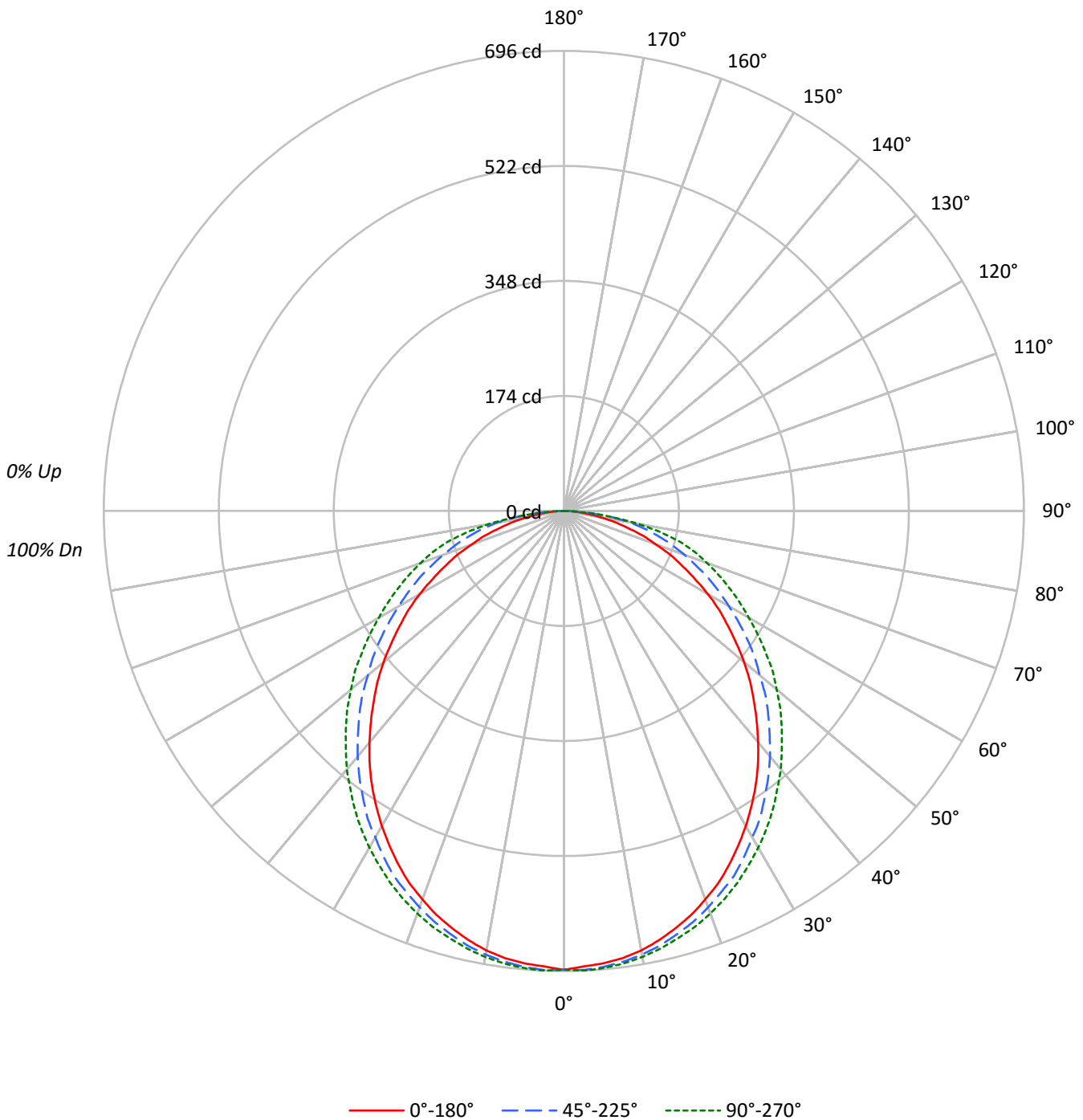
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-20HE-UNV-L82765-S-CA08-W2A-U-3000K

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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1868	1868	1868
5°	1855	1870	1875
10°	1845	1862	1872
15°	1820	1846	1863
20°	1791	1827	1856
25°	1755	1809	1844
30°	1710	1772	1828
35°	1663	1740	1811
40°	1606	1705	1794
45°	1548	1665	1775
50°	1491	1619	1759
55°	1421	1590	1747
60°	1357	1552	1741
65°	1266	1542	1761
70°	1166	1529	1814
75°	1052	1550	1908
80°	910	1596	1793
85°	753	1340	1340



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.6	3.4
10°-20°	186.8	9.6
20°-30°	279.5	14.4
30°-40°	331.0	17.1
40°-50°	337.3	17.4
50°-60°	302.3	15.6
60°-70°	236.7	12.2
70°-80°	152.6	7.9
80°-90°	45.1	2.3
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°	531.9	27.5
0°-40°	862.9	44.5
0°-60°	1502.6	77.6
0°-90°	1937.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1937.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	694	694	694	694	694	
5°	687	689	692	693	694	65
15°	653	657	662	668	669	184
25°	591	596	609	617	621	272
35°	506	512	530	546	551	316
45°	407	416	437	460	466	314
55°	303	313	339	362	372	271
65°	199	211	242	266	277	197
75°	101	117	149	174	184	108
85°	24	33	43	43	43	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	694.1	694.1	694.1	694.1	694.1
2.5°	689.6	691.4	695.0	695.9	695.9
5°	686.9	688.7	692.3	693.2	694.1
7.5°	682.3	683.2	687.8	689.6	690.5
10°	675.1	676.9	681.4	684.1	685.0
12.5°	665.2	667.9	673.3	676.9	677.8
15°	653.4	657.0	662.5	667.9	668.8
17.5°	640.8	644.4	651.6	657.9	659.7
20°	625.4	629.9	638.1	645.3	648.0
22.5°	610.0	613.7	623.6	632.6	635.3
25°	591.1	596.5	609.1	617.3	620.9
27.5°	571.2	577.5	590.2	601.0	604.6
30°	550.4	556.7	570.3	583.8	588.3
32.5°	528.7	535.9	552.2	565.8	570.3
35°	506.1	512.4	529.6	545.9	551.3
37.5°	482.6	488.0	507.9	525.1	530.5
40°	457.3	464.5	485.3	505.2	510.6
42.5°	432.0	440.1	460.9	482.6	488.0
45°	406.7	415.7	437.4	460.0	466.3
47.5°	382.3	389.5	413.9	435.6	444.6
50°	356.1	363.3	386.8	411.2	420.2
52.5°	329.0	338.9	364.2	387.7	398.6
55°	302.8	312.7	338.9	362.4	372.3
57.5°	278.4	286.5	313.6	338.0	347.9
60°	252.1	259.4	288.3	314.5	323.5
62.5°	224.1	235.0	264.8	289.2	300.0
65°	198.8	210.6	242.2	265.7	276.6
67.5°	175.3	186.2	216.9	242.2	254.0
70°	148.2	162.7	194.3	219.6	230.5
72.5°	126.5	139.2	171.7	197.0	208.8
75°	101.2	116.6	149.1	174.4	183.5
77.5°	80.4	95.8	126.5	146.4	150.9
80°	58.7	74.1	103.0	113.0	115.7
82.5°	39.8	54.2	74.1	76.8	77.7
85°	24.4	33.4	43.4	43.4	43.4
87.5°	11.7	13.6	15.4	14.5	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)