

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: P308872

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CA08-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: P308872
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-3500K
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: 2004.0 lumens
Efficiency: N/A
Efficacy: 119.3 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

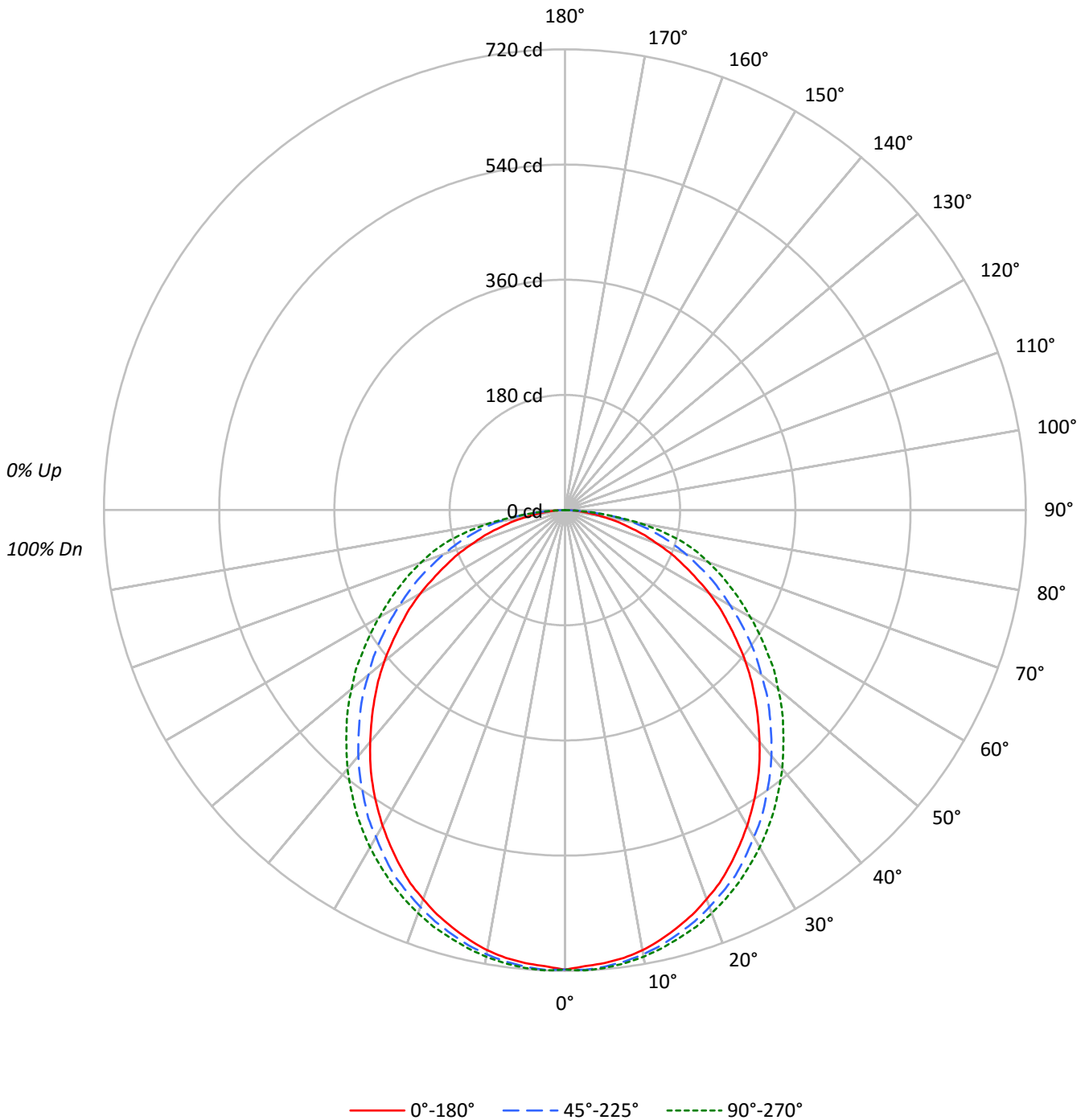
Input Watts (W): 16.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1932	1932	1932
5°	1920	1935	1940
10°	1909	1926	1937
15°	1883	1909	1928
20°	1853	1890	1920
25°	1816	1871	1907
30°	1769	1833	1891
35°	1720	1800	1874
40°	1662	1764	1856
45°	1601	1722	1836
50°	1542	1675	1820
55°	1469	1645	1807
60°	1404	1605	1801
65°	1310	1596	1822
70°	1206	1581	1876
75°	1089	1604	1973
80°	942	1652	1855
85°	778	1386	1386



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	3.4
10°-20°	193.3	9.6
20°-30°	289.2	14.4
30°-40°	342.4	17.1
40°-50°	349.0	17.4
50°-60°	312.8	15.6
60°-70°	244.9	12.2
70°-80°	157.9	7.9
80°-90°	46.7	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°	550.3	27.5
0°-40°	892.8	44.5
0°-60°	1554.5	77.6
0°-90°	2004.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2004.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	711	712	716	717	718	67
15°	676	680	685	691	692	191
25°	612	617	630	639	642	281
35°	524	530	548	565	570	327
45°	421	430	452	476	482	325
55°	313	324	351	375	385	281
65°	206	218	251	275	286	204
75°	105	121	154	180	190	112
85°	25	35	45	45	45	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	718.1	718.1	718.1	718.1	718.1
2.5°	713.4	715.3	719.0	720.0	720.0
5°	710.6	712.5	716.2	717.2	718.1
7.5°	705.9	706.9	711.6	713.4	714.4
10°	698.5	700.3	705.0	707.8	708.7
12.5°	688.2	691.0	696.6	700.3	701.3
15°	676.0	679.8	685.4	691.0	691.9
17.5°	662.9	666.7	674.1	680.7	682.6
20°	647.0	651.7	660.1	667.6	670.4
22.5°	631.1	634.9	645.2	654.5	657.3
25°	611.5	617.1	630.2	638.6	642.4
27.5°	590.9	597.5	610.6	621.8	625.5
30°	569.4	576.0	590.0	604.0	608.7
32.5°	547.0	554.5	571.3	585.3	590.0
35°	523.6	530.2	547.9	564.8	570.4
37.5°	499.3	504.9	525.5	543.2	548.9
40°	473.1	480.6	502.1	522.7	528.3
42.5°	446.9	455.4	476.9	499.3	504.9
45°	420.8	430.1	452.5	475.9	482.5
47.5°	395.5	403.0	428.2	450.7	460.0
50°	368.4	375.9	400.2	425.4	434.8
52.5°	340.3	350.6	376.8	401.1	412.3
55°	313.2	323.5	350.6	374.9	385.2
57.5°	288.0	296.4	324.5	349.7	360.0
60°	260.9	268.4	298.3	325.4	334.7
62.5°	231.9	243.1	274.0	299.2	310.4
65°	205.7	217.9	250.6	274.9	286.1
67.5°	181.4	192.6	224.4	250.6	262.7
70°	153.3	168.3	201.0	227.2	238.4
72.5°	130.9	144.0	177.7	203.8	216.0
75°	104.7	120.6	154.3	180.5	189.8
77.5°	83.2	99.1	130.9	151.5	156.1
80°	60.8	76.7	106.6	116.9	119.7
82.5°	41.1	56.1	76.7	79.5	80.4
85°	25.2	34.6	44.9	44.9	44.9
87.5°	12.2	14.0	15.9	15.0	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)