

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: P308905

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP187-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: P308905
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-CP187-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB 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: 2007.0 lumens
Efficiency: N/A
Efficacy: 115.3 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

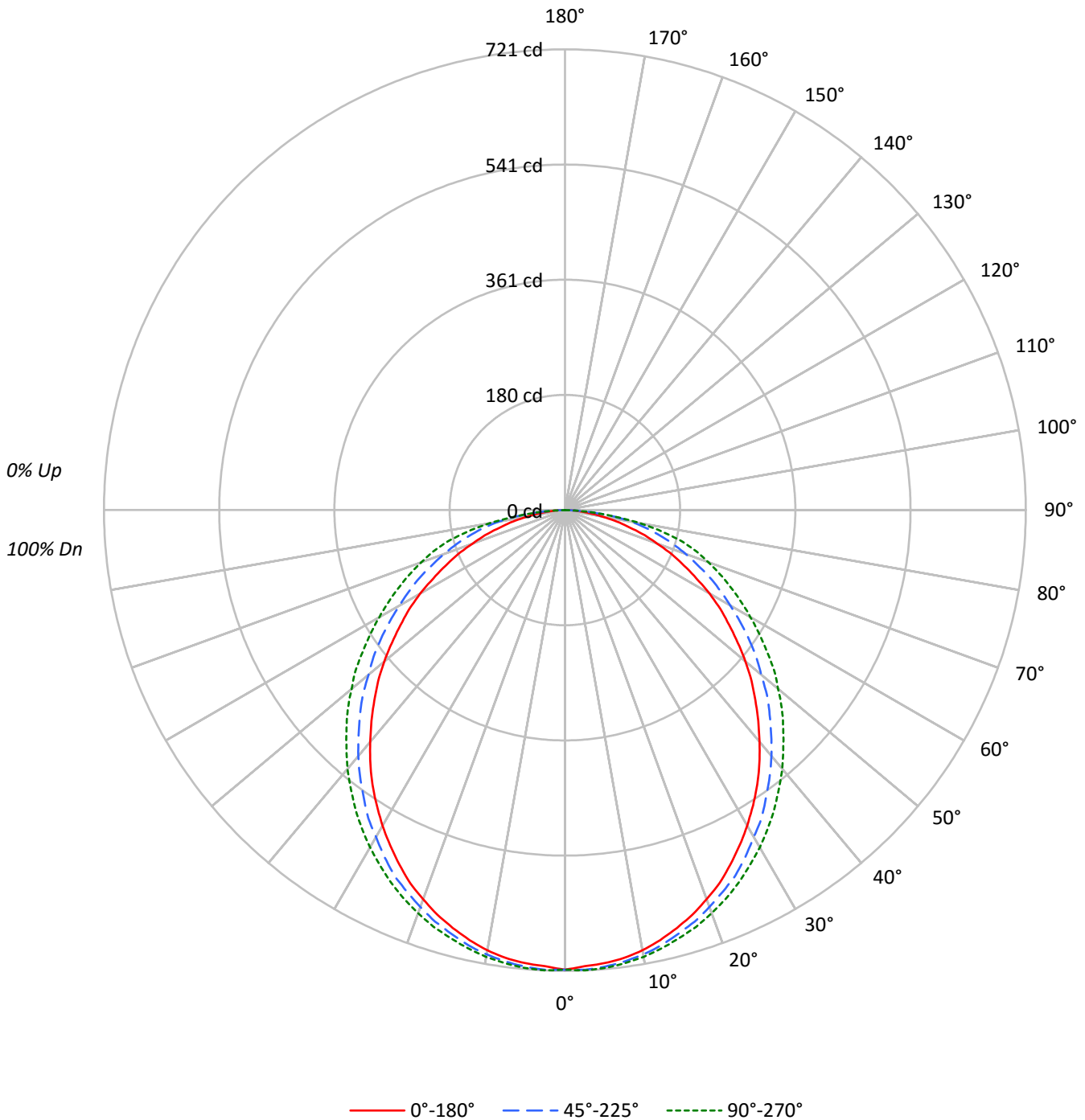
Input Watts (W): 17.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1935	1935	1935
5°	1922	1938	1943
10°	1911	1929	1940
15°	1886	1912	1931
20°	1856	1893	1923
25°	1818	1874	1910
30°	1772	1836	1894
35°	1723	1803	1876
40°	1664	1767	1859
45°	1604	1725	1839
50°	1544	1678	1823
55°	1472	1648	1810
60°	1406	1608	1804
65°	1312	1598	1824
70°	1209	1584	1879
75°	1091	1606	1976
80°	944	1655	1858
85°	781	1386	1386



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	3.4
10°-20°	193.5	9.6
20°-30°	289.6	14.4
30°-40°	343.0	17.1
40°-50°	349.5	17.4
50°-60°	313.3	15.6
60°-70°	245.3	12.2
70°-80°	158.2	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°	551.1	27.5
0°-40°	894.1	44.5
0°-60°	1556.9	77.6
0°-90°	2007.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2007.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	719	719	719	719	719	
5°	712	714	717	718	719	68
15°	677	681	686	692	693	191
25°	612	618	631	640	643	282
35°	524	531	549	566	571	328
45°	421	431	453	477	483	325
55°	314	324	351	376	386	281
65°	206	218	251	275	286	205
75°	105	121	154	181	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°	719.2	719.2	719.2	719.2	719.2
2.5°	714.5	716.4	720.1	721.0	721.0
5°	711.7	713.6	717.3	718.2	719.2
7.5°	707.0	707.9	712.6	714.5	715.4
10°	699.5	701.4	706.1	708.9	709.8
12.5°	689.2	692.0	697.6	701.4	702.3
15°	677.0	680.8	686.4	692.0	693.0
17.5°	663.9	667.7	675.2	681.7	683.6
20°	648.0	652.7	661.1	668.6	671.4
22.5°	632.1	635.8	646.1	655.5	658.3
25°	612.4	618.0	631.1	639.6	643.3
27.5°	591.8	598.4	611.5	622.7	626.5
30°	570.3	576.8	590.9	604.9	609.6
32.5°	547.8	555.3	572.2	586.2	590.9
35°	524.4	531.0	548.7	565.6	571.2
37.5°	500.0	505.7	526.3	544.1	549.7
40°	473.8	481.3	502.9	523.5	529.1
42.5°	447.6	456.0	477.6	500.0	505.7
45°	421.4	430.8	453.2	476.6	483.2
47.5°	396.1	403.6	428.9	451.4	460.7
50°	368.9	376.4	400.8	426.1	435.4
52.5°	340.9	351.2	377.4	401.7	413.0
55°	313.7	324.0	351.2	375.5	385.8
57.5°	288.4	296.8	324.9	350.2	360.5
60°	261.3	268.8	298.7	325.9	335.2
62.5°	232.2	243.5	274.4	299.7	310.9
65°	206.0	218.2	251.0	275.3	286.5
67.5°	181.7	192.9	224.7	251.0	263.1
70°	153.6	168.6	201.3	227.6	238.8
72.5°	131.1	144.2	177.9	204.1	216.3
75°	104.9	120.8	154.5	180.7	190.1
77.5°	83.3	99.3	131.1	151.7	156.4
80°	60.9	76.8	106.8	117.1	119.9
82.5°	41.2	56.2	76.8	79.6	80.5
85°	25.3	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)