

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: P308900

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-S-CP187-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: P308900
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-4000K
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: 1916.0 lumens
Efficiency: N/A
Efficacy: 113.4 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

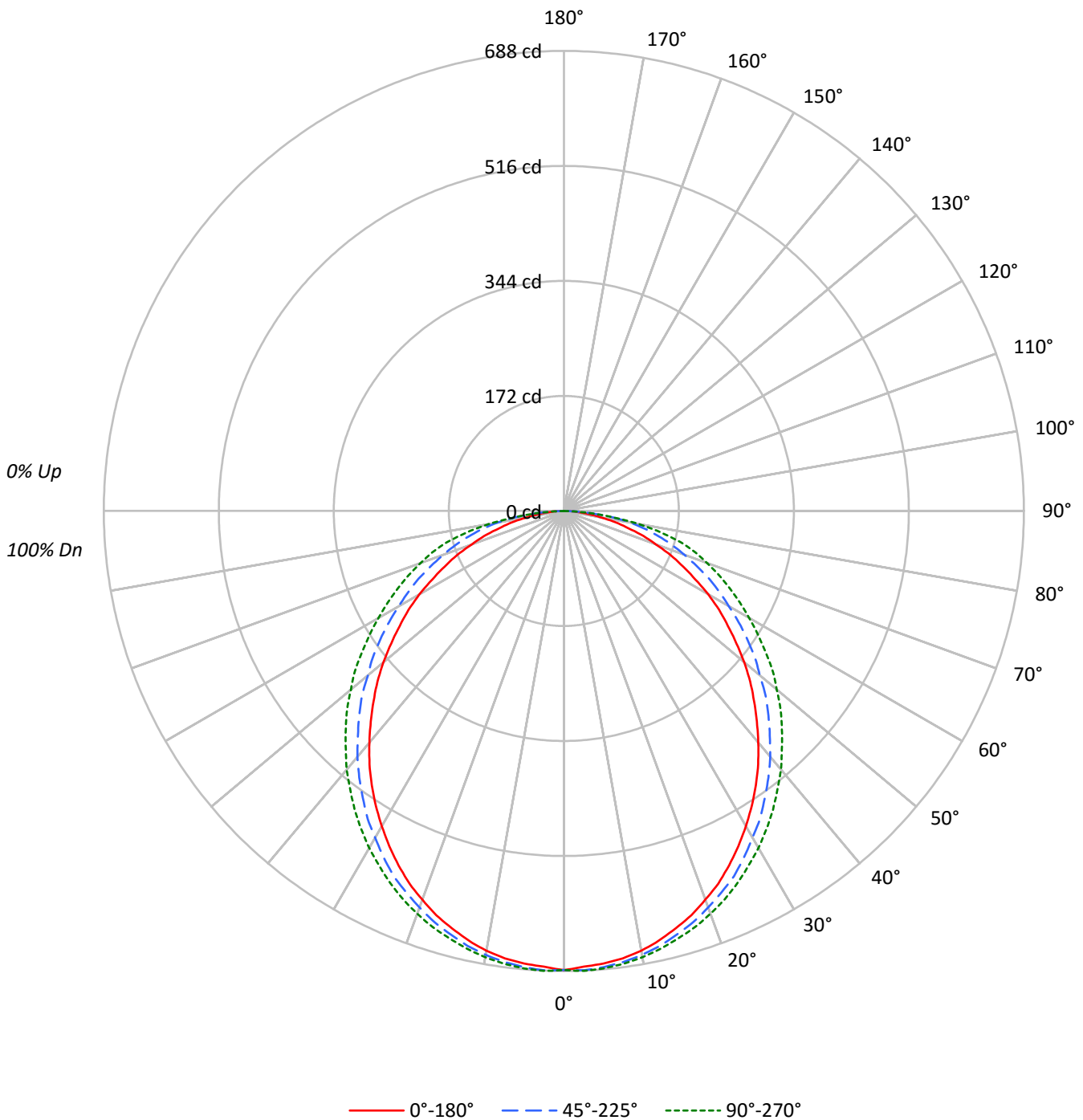
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1848	1848	1848
5°	1835	1850	1855
10°	1825	1842	1852
15°	1801	1826	1843
20°	1771	1807	1836
25°	1736	1789	1824
30°	1692	1753	1808
35°	1645	1721	1791
40°	1589	1687	1774
45°	1531	1647	1756
50°	1474	1602	1740
55°	1405	1573	1728
60°	1342	1535	1722
65°	1252	1526	1742
70°	1153	1512	1794
75°	1041	1534	1887
80°	900	1579	1773
85°	744	1325	1325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.9	3.4
10°-20°	184.8	9.6
20°-30°	276.5	14.4
30°-40°	327.4	17.1
40°-50°	333.7	17.4
50°-60°	299.1	15.6
60°-70°	234.1	12.2
70°-80°	151.0	7.9
80°-90°	44.6	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°	526.2	27.5
0°-40°	853.6	44.5
0°-60°	1486.3	77.6
0°-90°	1916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	687	687	687	687	687	
5°	679	681	685	686	687	65
15°	646	650	655	661	662	182
25°	585	590	602	611	614	269
35°	501	507	524	540	545	313
45°	402	411	433	455	461	311
55°	300	309	335	358	368	269
65°	197	208	240	263	274	195
75°	100	115	148	172	182	107
85°	24	33	43	43	43	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	686.6	686.6	686.6	686.6	686.6
2.5°	682.1	683.9	687.5	688.4	688.4
5°	679.4	681.2	684.8	685.7	686.6
7.5°	674.9	675.8	680.3	682.1	683.0
10°	667.8	669.6	674.0	676.7	677.6
12.5°	658.0	660.6	666.0	669.6	670.5
15°	646.3	649.9	655.3	660.6	661.5
17.5°	633.8	637.4	644.5	650.8	652.6
20°	618.6	623.1	631.1	638.3	641.0
22.5°	603.4	607.0	616.8	625.8	628.5
25°	584.7	590.0	602.5	610.6	614.2
27.5°	565.0	571.2	583.8	594.5	598.1
30°	544.4	550.7	564.1	577.5	582.0
32.5°	523.0	530.1	546.2	559.6	564.1
35°	500.6	506.9	523.9	540.0	545.3
37.5°	477.4	482.7	502.4	519.4	524.8
40°	452.3	459.5	480.1	499.7	505.1
42.5°	427.3	435.4	455.9	477.4	482.7
45°	402.3	411.2	432.7	455.0	461.3
47.5°	378.1	385.3	409.4	430.9	439.8
50°	352.2	359.4	382.6	406.8	415.7
52.5°	325.4	335.2	360.3	383.5	394.2
55°	299.5	309.3	335.2	358.5	368.3
57.5°	275.3	283.4	310.2	334.3	344.2
60°	249.4	256.6	285.2	311.1	320.0
62.5°	221.7	232.4	261.9	286.1	296.8
65°	196.7	208.3	239.6	262.8	273.6
67.5°	173.4	184.2	214.6	239.6	251.2
70°	146.6	160.9	192.2	217.2	228.0
72.5°	125.2	137.7	169.9	194.9	206.5
75°	100.1	115.3	147.5	172.5	181.5
77.5°	79.6	94.8	125.2	144.8	149.3
80°	58.1	73.3	101.9	111.7	114.4
82.5°	39.3	53.6	73.3	76.0	76.9
85°	24.1	33.1	42.9	42.9	42.9
87.5°	11.6	13.4	15.2	14.3	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)