

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: P308945

Luminaire Tested: **22FCZ2-24HE-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: P308945
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: 22FCZ2-24HE-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: 2163.0 lumens
Efficiency: N/A
Efficacy: 113.2 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

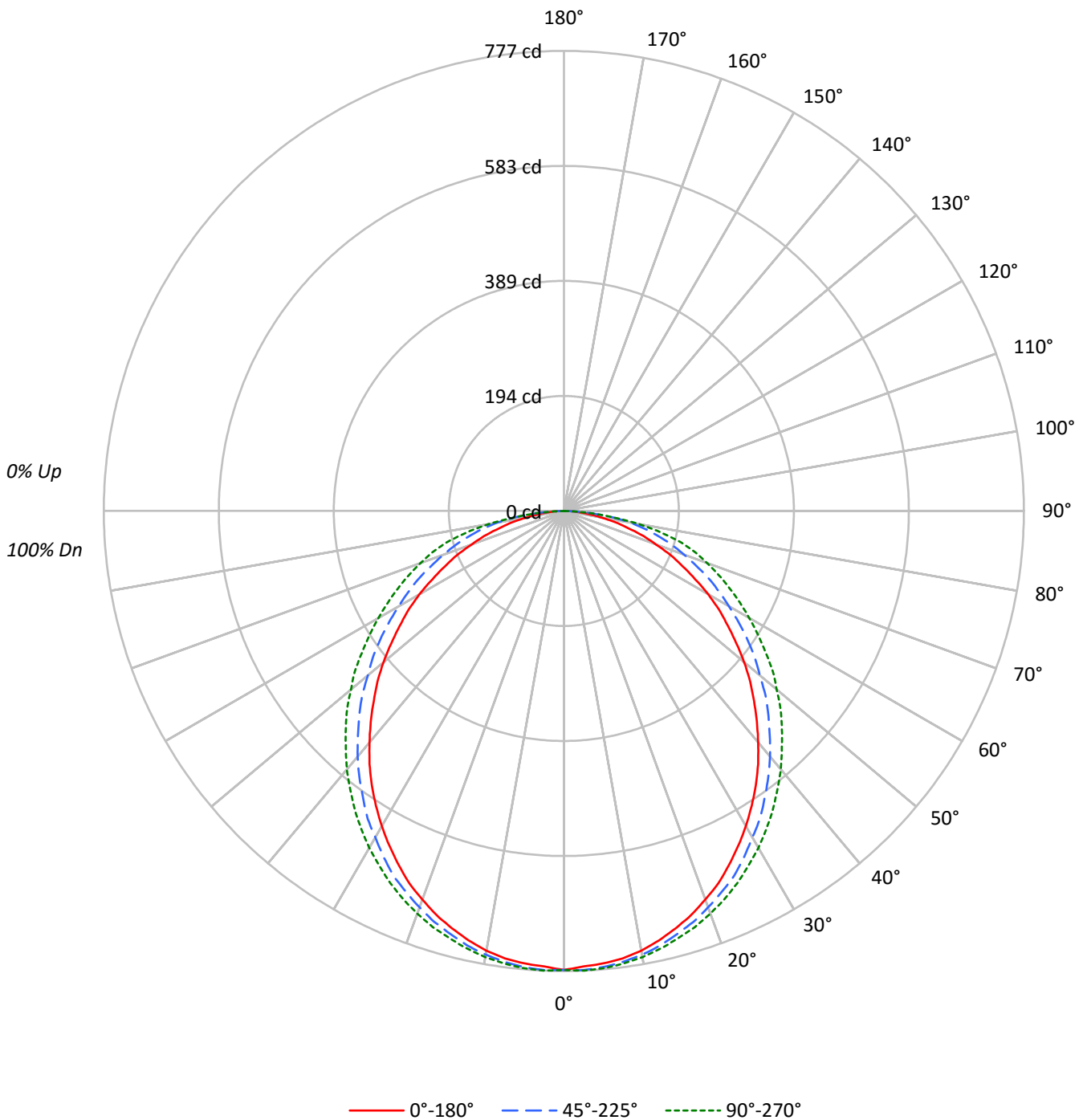
Input Watts (W): 19.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2086	2086	2086
5°	2072	2088	2094
10°	2060	2079	2090
15°	2033	2061	2081
20°	2000	2040	2072
25°	1960	2020	2059
30°	1910	1979	2041
35°	1857	1943	2022
40°	1794	1904	2003
45°	1728	1859	1982
50°	1665	1808	1965
55°	1586	1776	1951
60°	1516	1732	1945
65°	1414	1722	1966
70°	1302	1707	2024
75°	1175	1731	2130
80°	1017	1782	2002
85°	840	1494	1494



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.3	3.4
10°-20°	208.6	9.6
20°-30°	312.1	14.4
30°-40°	369.6	17.1
40°-50°	376.7	17.4
50°-60°	337.6	15.6
60°-70°	264.3	12.2
70°-80°	170.4	7.9
80°-90°	50.3	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°	594.0	27.5
0°-40°	963.6	44.5
0°-60°	1677.9	77.6
0°-90°	2163.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2163.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	775	775	775	775	775	
5°	767	769	773	774	775	73
15°	730	734	740	746	747	206
25°	660	666	680	689	693	304
35°	565	572	591	610	616	353
45°	454	464	488	514	521	351
55°	338	349	378	405	416	303
65°	222	235	270	297	309	221
75°	113	130	166	195	205	121
85°	27	37	48	48	48	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	775.1	775.1	775.1	775.1	775.1
2.5°	770.0	772.0	776.1	777.1	777.1
5°	767.0	769.0	773.1	774.1	775.1
7.5°	762.0	763.0	768.0	770.0	771.0
10°	753.9	755.9	760.9	764.0	765.0
12.5°	742.8	745.8	751.9	755.9	756.9
15°	729.7	733.7	739.7	745.8	746.8
17.5°	715.5	719.6	727.6	734.7	736.7
20°	698.4	703.4	712.5	720.6	723.6
22.5°	681.2	685.3	696.4	706.4	709.5
25°	660.0	666.1	680.2	689.3	693.3
27.5°	637.8	644.9	659.0	671.1	675.2
30°	614.6	621.7	636.8	651.9	657.0
32.5°	590.4	598.5	616.6	631.8	636.8
35°	565.2	572.2	591.4	609.6	615.6
37.5°	538.9	545.0	567.2	586.3	592.4
40°	510.7	518.7	541.9	564.1	570.2
42.5°	482.4	491.5	514.7	538.9	545.0
45°	454.1	464.2	488.5	513.7	520.8
47.5°	426.9	435.0	462.2	486.4	496.5
50°	397.6	405.7	431.9	459.2	469.3
52.5°	367.4	378.5	406.7	432.9	445.1
55°	338.1	349.2	378.5	404.7	415.8
57.5°	310.8	319.9	350.2	377.4	388.5
60°	281.6	289.6	321.9	351.2	361.3
62.5°	250.3	262.4	295.7	322.9	335.1
65°	222.0	235.1	270.5	296.7	308.8
67.5°	195.8	207.9	242.2	270.5	283.6
70°	165.5	181.7	217.0	245.2	257.3
72.5°	141.3	155.4	191.7	220.0	233.1
75°	113.0	130.2	166.5	194.8	204.9
77.5°	89.8	107.0	141.3	163.5	168.5
80°	65.6	82.8	115.0	126.2	129.2
82.5°	44.4	60.6	82.8	85.8	86.8
85°	27.2	37.3	48.4	48.4	48.4
87.5°	13.1	15.1	17.2	16.1	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)