

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: P308934

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP125-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: P308934
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-CP125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 2136.0 lumens
Efficiency: N/A
Efficacy: 113.6 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

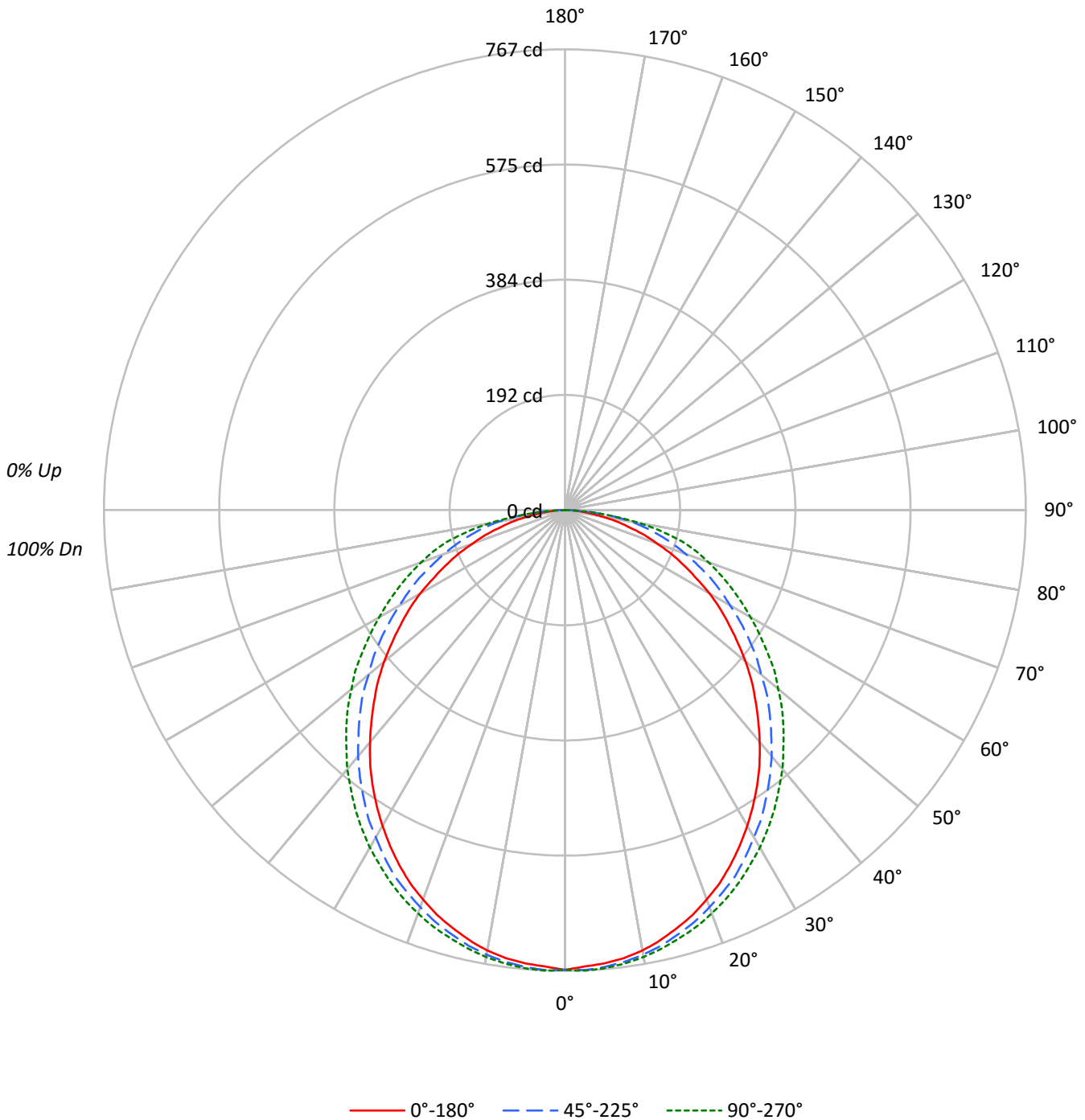
Input Watts (W): 18.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2060	2060	2060
5°	2046	2062	2068
10°	2034	2053	2064
15°	2007	2035	2055
20°	1975	2015	2046
25°	1935	1994	2033
30°	1886	1954	2016
35°	1833	1918	1997
40°	1772	1880	1978
45°	1707	1836	1957
50°	1644	1786	1940
55°	1567	1753	1926
60°	1497	1711	1920
65°	1396	1701	1942
70°	1286	1686	1999
75°	1160	1709	2103
80°	1004	1760	1977
85°	831	1476	1476



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.4	3.4
10°-20°	206.0	9.6
20°-30°	308.2	14.4
30°-40°	365.0	17.1
40°-50°	372.0	17.4
50°-60°	333.4	15.6
60°-70°	261.0	12.2
70°-80°	168.3	7.9
80°-90°	49.7	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°	586.6	27.5
0°-40°	951.6	44.5
0°-60°	1656.9	77.6
0°-90°	2136.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2136.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	757	759	763	764	765	72
15°	720	724	730	736	738	203
25°	652	658	672	681	685	300
35°	558	565	584	602	608	349
45°	448	458	482	507	514	346
55°	334	345	374	400	411	299
65°	219	232	267	293	305	218
75°	112	129	164	192	202	120
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°	765.4	765.4	765.4	765.4	765.4
2.5°	760.4	762.4	766.4	767.4	767.4
5°	757.4	759.4	763.4	764.4	765.4
7.5°	752.4	753.4	758.4	760.4	761.4
10°	744.5	746.5	751.4	754.4	755.4
12.5°	733.5	736.5	742.5	746.5	747.5
15°	720.5	724.5	730.5	736.5	737.5
17.5°	706.6	710.6	718.6	725.5	727.5
20°	689.7	694.6	703.6	711.6	714.6
22.5°	672.7	676.7	687.7	697.6	700.6
25°	651.8	657.8	671.7	680.7	684.7
27.5°	629.9	636.8	650.8	662.7	666.7
30°	606.9	613.9	628.9	643.8	648.8
32.5°	583.0	591.0	608.9	623.9	628.9
35°	558.1	565.1	584.0	602.0	607.9
37.5°	532.2	538.2	560.1	579.0	585.0
40°	504.3	512.3	535.2	557.1	563.1
42.5°	476.4	485.3	508.3	532.2	538.2
45°	448.5	458.4	482.4	507.3	514.3
47.5°	421.6	429.5	456.4	480.4	490.3
50°	392.7	400.6	426.5	453.5	463.4
52.5°	362.8	373.7	401.6	427.5	439.5
55°	333.9	344.8	373.7	399.6	410.6
57.5°	307.0	315.9	345.8	372.7	383.7
60°	278.1	286.0	317.9	346.8	356.8
62.5°	247.2	259.1	292.0	318.9	330.9
65°	219.3	232.2	267.1	293.0	305.0
67.5°	193.3	205.3	239.2	267.1	280.0
70°	163.4	179.4	214.3	242.2	254.1
72.5°	139.5	153.5	189.4	217.3	230.2
75°	111.6	128.6	164.4	192.3	202.3
77.5°	88.7	105.6	139.5	161.5	166.4
80°	64.8	81.7	113.6	124.6	127.6
82.5°	43.9	59.8	81.7	84.7	85.7
85°	26.9	36.9	47.8	47.8	47.8
87.5°	13.0	14.9	16.9	15.9	15.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)