

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: P308922

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA08-W2A-U-5700K**

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: P308922
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-CA08-W2A-U-5700K
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: 2414.0 lumens
Efficiency: N/A
Efficacy: 124.4 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

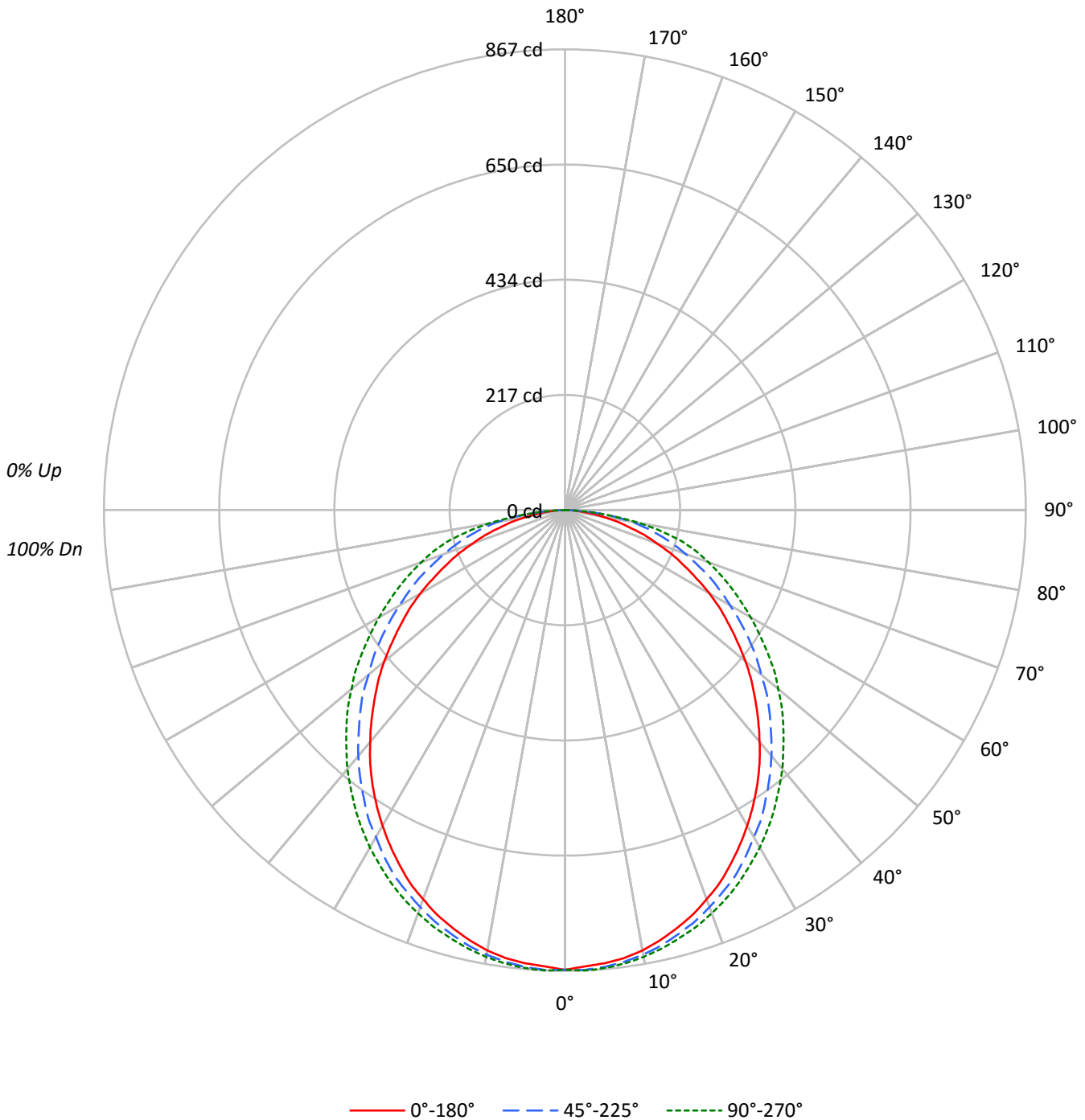
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2328	2328	2328
5°	2312	2331	2337
10°	2299	2320	2333
15°	2269	2300	2322
20°	2232	2277	2313
25°	2187	2254	2298
30°	2131	2208	2278
35°	2072	2168	2257
40°	2002	2125	2236
45°	1929	2074	2212
50°	1858	2018	2192
55°	1770	1982	2177
60°	1691	1934	2170
65°	1578	1922	2195
70°	1453	1906	2260
75°	1311	1932	2377
80°	1134	1990	2235
85°	939	1670	1670



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	3.4
10°-20°	232.8	9.6
20°-30°	348.3	14.4
30°-40°	412.5	17.1
40°-50°	420.4	17.4
50°-60°	376.8	15.6
60°-70°	295.0	12.2
70°-80°	190.2	7.9
80°-90°	56.2	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°	662.9	27.5
0°-40°	1075.4	44.5
0°-60°	1872.6	77.6
0°-90°	2414.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2414.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	865	865	865	865	865	
5°	856	858	863	864	865	81
15°	814	819	826	832	834	230
25°	737	743	759	769	774	339
35°	631	639	660	680	687	394
45°	507	518	545	573	581	391
55°	377	390	422	452	464	338
65°	248	262	302	331	345	246
75°	126	145	186	217	229	135
85°	30	42	54	54	54	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	865.0	865.0	865.0	865.0	865.0
2.5°	859.4	861.6	866.1	867.3	867.3
5°	856.0	858.3	862.8	863.9	865.0
7.5°	850.4	851.5	857.1	859.4	860.5
10°	841.4	843.6	849.2	852.6	853.7
12.5°	829.0	832.3	839.1	843.6	844.7
15°	814.3	818.8	825.6	832.3	833.5
17.5°	798.6	803.1	812.1	820.0	822.2
20°	779.4	785.0	795.2	804.2	807.6
22.5°	760.3	764.8	777.2	788.4	791.8
25°	736.6	743.4	759.1	769.3	773.8
27.5°	711.8	719.7	735.5	749.0	753.5
30°	685.9	693.8	710.7	727.6	733.2
32.5°	658.9	667.9	688.2	705.1	710.7
35°	630.7	638.6	660.0	680.3	687.1
37.5°	601.5	608.2	633.0	654.4	661.1
40°	569.9	578.9	604.8	629.6	636.4
42.5°	538.4	548.5	574.4	601.5	608.2
45°	506.8	518.1	545.1	573.3	581.2
47.5°	476.4	485.4	515.9	542.9	554.1
50°	443.8	452.8	482.1	512.5	523.7
52.5°	410.0	422.4	453.9	483.2	496.7
55°	377.3	389.7	422.4	451.7	464.0
57.5°	346.9	357.0	390.8	421.2	433.6
60°	314.2	323.3	359.3	392.0	403.2
62.5°	279.3	292.8	330.0	360.4	373.9
65°	247.8	262.4	301.9	331.1	344.7
67.5°	218.5	232.0	270.3	301.9	316.5
70°	184.7	202.7	242.2	273.7	287.2
72.5°	157.7	173.5	214.0	245.5	260.2
75°	126.1	145.3	185.8	217.4	228.6
77.5°	100.2	119.4	157.7	182.5	188.1
80°	73.2	92.4	128.4	140.8	144.2
82.5°	49.6	67.6	92.4	95.7	96.9
85°	30.4	41.7	54.1	54.1	54.1
87.5°	14.6	16.9	19.1	18.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)