

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: P308918

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA08-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: P308918  
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-4000K  
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**

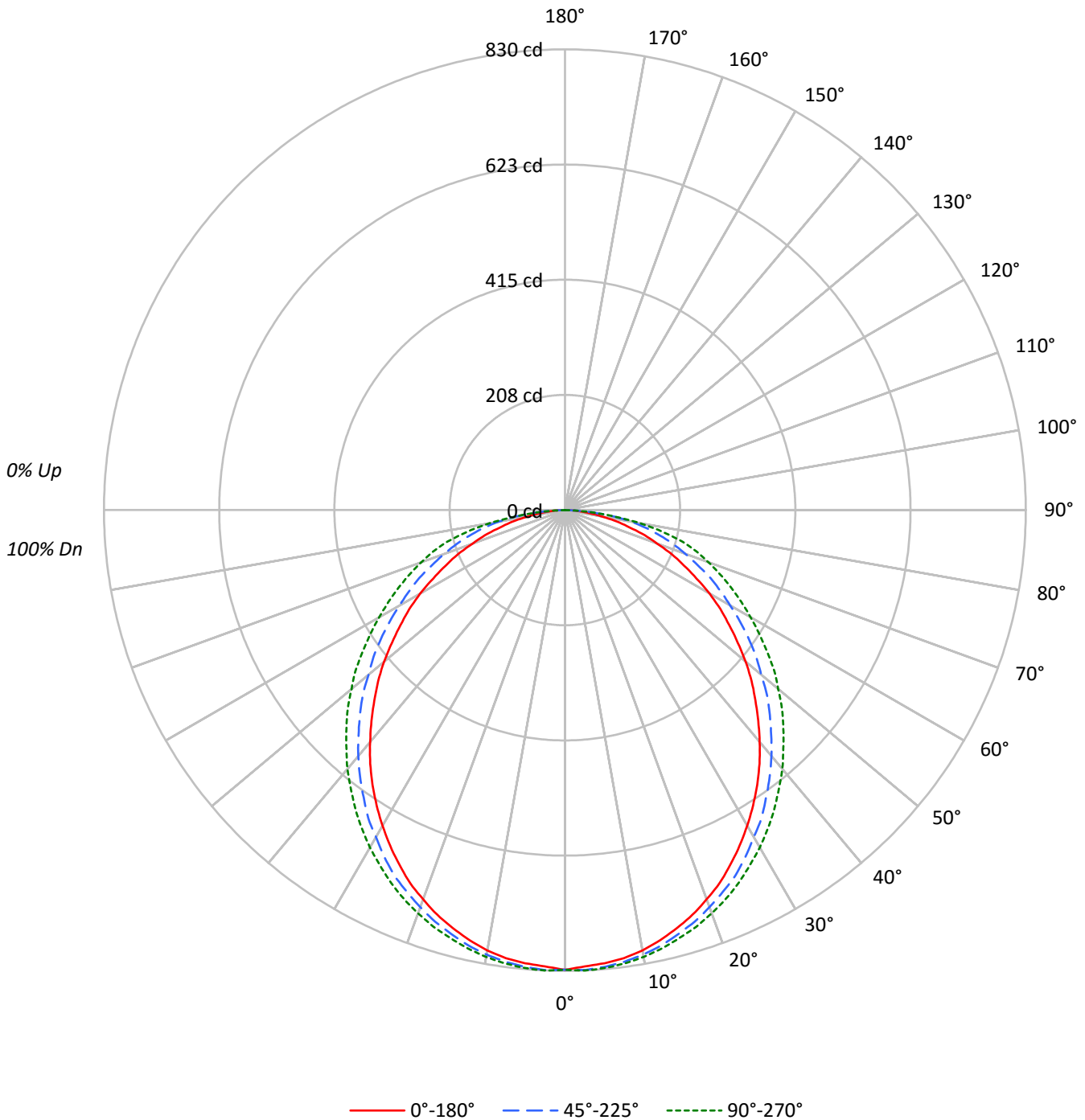
Lumens per Lamp: N/A  
Luminaire Lumens: 2311.0 lumens  
Efficiency: N/A  
Efficacy: 121.0 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	2228	2228	2228
5°	2214	2231	2237
10°	2201	2222	2233
15°	2172	2202	2223
20°	2137	2180	2214
25°	2094	2158	2200
30°	2041	2114	2181
35°	1984	2076	2161
40°	1917	2034	2140
45°	1846	1986	2117
50°	1778	1932	2099
55°	1695	1897	2084
60°	1619	1851	2077
65°	1510	1840	2101
70°	1391	1824	2164
75°	1256	1850	2276
80°	1086	1905	2139
85°	898	1599	1599



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.3	3.4
10°-20°	222.9	9.6
20°-30°	333.5	14.4
30°-40°	394.9	17.1
40°-50°	402.4	17.4
50°-60°	360.7	15.6
60°-70°	282.4	12.2
70°-80°	182.1	7.9
80°-90°	53.8	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°	634.6	27.5
0°-40°	1029.5	44.5
0°-60°	1792.7	77.6
0°-90°	2311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2311.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	820	822	826	827	828	78
15°	780	784	790	797	798	220
25°	705	712	727	736	741	325
35°	604	611	632	651	658	377
45°	485	496	522	549	556	375
55°	361	373	404	432	444	324
65°	237	251	289	317	330	236
75°	121	139	178	208	219	130
85°	29	40	52	52	52	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	828.1	828.1	828.1	828.1	828.1
2.5°	822.7	824.9	829.2	830.3	830.3
5°	819.5	821.6	825.9	827.0	828.1
7.5°	814.1	815.2	820.6	822.7	823.8
10°	805.5	807.6	813.0	816.2	817.3
12.5°	793.6	796.8	803.3	807.6	808.7
15°	779.6	783.9	790.4	796.8	797.9
17.5°	764.5	768.8	777.4	785.0	787.1
20°	746.2	751.5	761.3	769.9	773.1
22.5°	727.8	732.1	744.0	754.8	758.0
25°	705.2	711.7	726.7	736.5	740.8
27.5°	681.5	689.0	704.1	717.0	721.4
30°	656.7	664.2	680.4	696.6	701.9
32.5°	630.8	639.4	658.8	675.0	680.4
35°	603.8	611.4	631.9	651.3	657.7
37.5°	575.8	582.3	606.0	626.5	632.9
40°	545.6	554.2	579.0	602.7	609.2
42.5°	515.4	525.1	549.9	575.8	582.3
45°	485.2	496.0	521.9	548.8	556.4
47.5°	456.1	464.7	493.8	519.7	530.5
50°	424.8	433.5	461.5	490.6	501.4
52.5°	392.5	404.3	434.5	462.6	475.5
55°	361.2	373.1	404.3	432.4	444.2
57.5°	332.1	341.8	374.2	403.3	415.1
60°	300.8	309.5	344.0	375.2	386.0
62.5°	267.4	280.3	315.9	345.0	358.0
65°	237.2	251.2	289.0	317.0	329.9
67.5°	209.2	222.1	258.8	289.0	303.0
70°	176.8	194.1	231.8	262.0	275.0
72.5°	151.0	166.1	204.9	235.1	249.1
75°	120.8	139.1	177.9	208.1	218.9
77.5°	96.0	114.3	151.0	174.7	180.1
80°	70.1	88.4	122.9	134.8	138.0
82.5°	47.4	64.7	88.4	91.7	92.7
85°	29.1	39.9	51.8	51.8	51.8
87.5°	14.0	16.2	18.3	17.3	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)