

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: P308920

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CA08-W2A-U-5000K**

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: P308920
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-5000K
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: 2383.0 lumens
Efficiency: N/A
Efficacy: 123.5 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

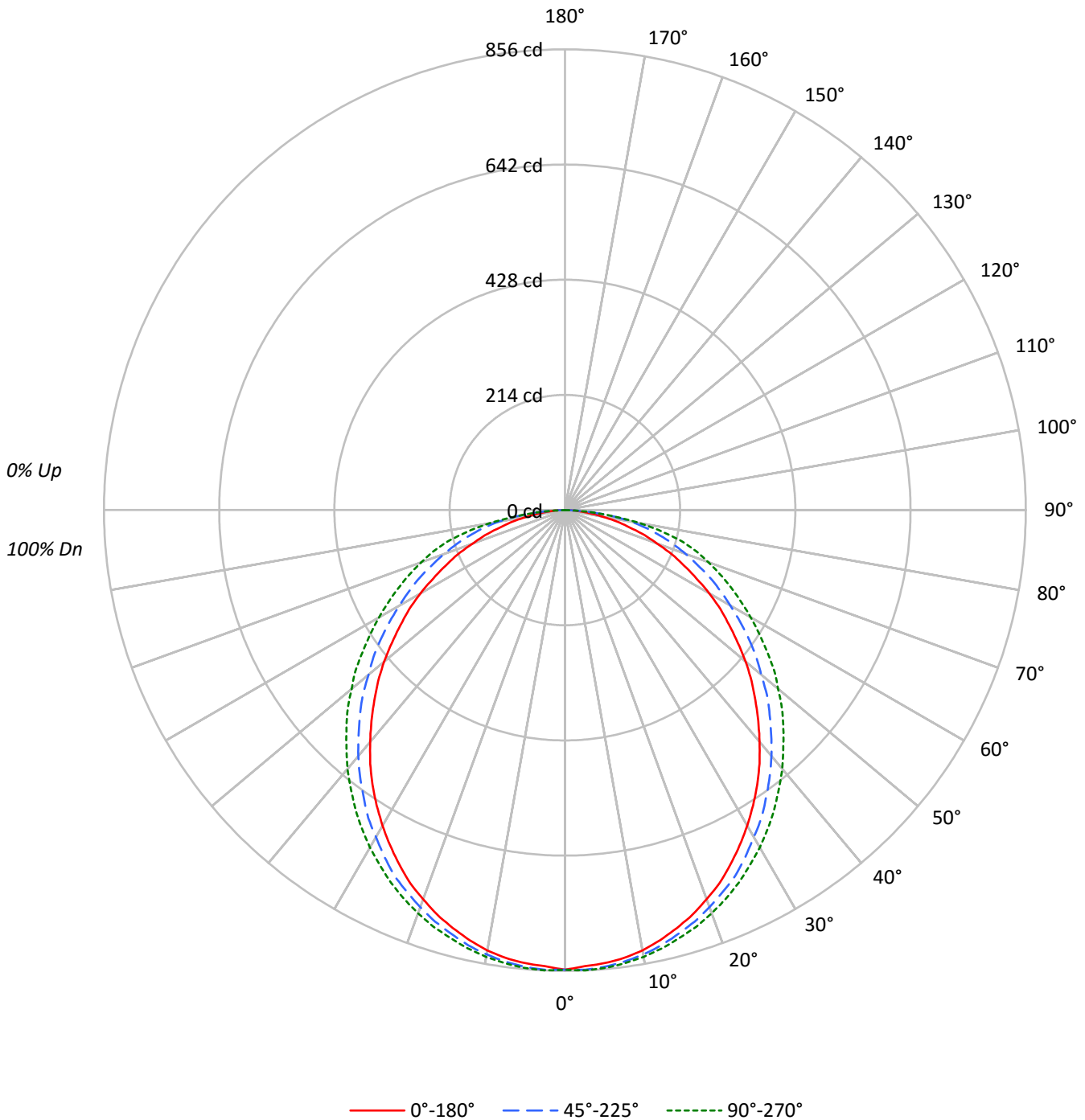
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2298	2298	2298
5°	2283	2301	2307
10°	2270	2291	2303
15°	2240	2271	2292
20°	2203	2248	2283
25°	2159	2225	2268
30°	2104	2180	2249
35°	2045	2140	2228
40°	1976	2098	2207
45°	1904	2048	2183
50°	1834	1992	2164
55°	1748	1956	2149
60°	1669	1909	2142
65°	1557	1897	2166
70°	1434	1880	2231
75°	1294	1908	2347
80°	1120	1965	2205
85°	926	1649	1649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.8	3.4
10°-20°	229.8	9.6
20°-30°	343.8	14.4
30°-40°	407.2	17.1
40°-50°	415.0	17.4
50°-60°	371.9	15.6
60°-70°	291.2	12.2
70°-80°	187.8	7.9
80°-90°	55.5	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°	654.4	27.5
0°-40°	1061.6	44.5
0°-60°	1848.5	77.6
0°-90°	2383.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2383.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	854	854	854	854	854	
5°	845	847	852	853	854	80
15°	804	808	815	822	823	227
25°	727	734	749	759	764	335
35°	623	630	652	672	678	389
45°	500	512	538	566	574	386
55°	372	385	417	446	458	334
65°	245	259	298	327	340	243
75°	124	143	184	215	226	134
85°	30	41	53	53	53	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	853.9	853.9	853.9	853.9	853.9
2.5°	848.3	850.6	855.0	856.1	856.1
5°	845.0	847.2	851.7	852.8	853.9
7.5°	839.4	840.6	846.1	848.3	849.5
10°	830.6	832.8	838.3	841.7	842.8
12.5°	818.3	821.7	828.3	832.8	833.9
15°	803.9	808.3	815.0	821.7	822.8
17.5°	788.3	792.8	801.6	809.4	811.7
20°	769.4	775.0	785.0	793.9	797.2
22.5°	750.5	754.9	767.2	778.3	781.6
25°	727.2	733.8	749.4	759.4	763.8
27.5°	702.7	710.5	726.0	739.4	743.8
30°	677.1	684.9	701.6	718.3	723.8
32.5°	650.4	659.3	679.3	696.0	701.6
35°	622.6	630.4	651.5	671.6	678.2
37.5°	593.7	600.4	624.9	646.0	652.7
40°	562.6	571.5	597.1	621.5	628.2
42.5°	531.5	541.5	567.0	593.7	600.4
45°	500.3	511.5	538.1	565.9	573.7
47.5°	470.3	479.2	509.2	535.9	547.0
50°	438.1	447.0	475.9	505.9	517.0
52.5°	404.7	416.9	448.1	477.0	490.3
55°	372.5	384.7	416.9	445.9	458.1
57.5°	342.5	352.5	385.8	415.8	428.1
60°	310.2	319.1	354.7	386.9	398.0
62.5°	275.7	289.1	325.8	355.8	369.1
65°	244.6	259.1	298.0	326.9	340.2
67.5°	215.7	229.0	266.8	298.0	312.4
70°	182.3	200.1	239.0	270.2	283.5
72.5°	155.7	171.2	211.3	242.4	256.8
75°	124.5	143.4	183.5	214.6	225.7
77.5°	99.0	117.9	155.7	180.1	185.7
80°	72.3	91.2	126.8	139.0	142.3
82.5°	48.9	66.7	91.2	94.5	95.6
85°	30.0	41.1	53.4	53.4	53.4
87.5°	14.5	16.7	18.9	17.8	17.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)