

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: P312772

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CA125-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: P312772
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-L83050-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 4000K 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: 2297.0 lumens
Efficiency: N/A
Efficacy: 119.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

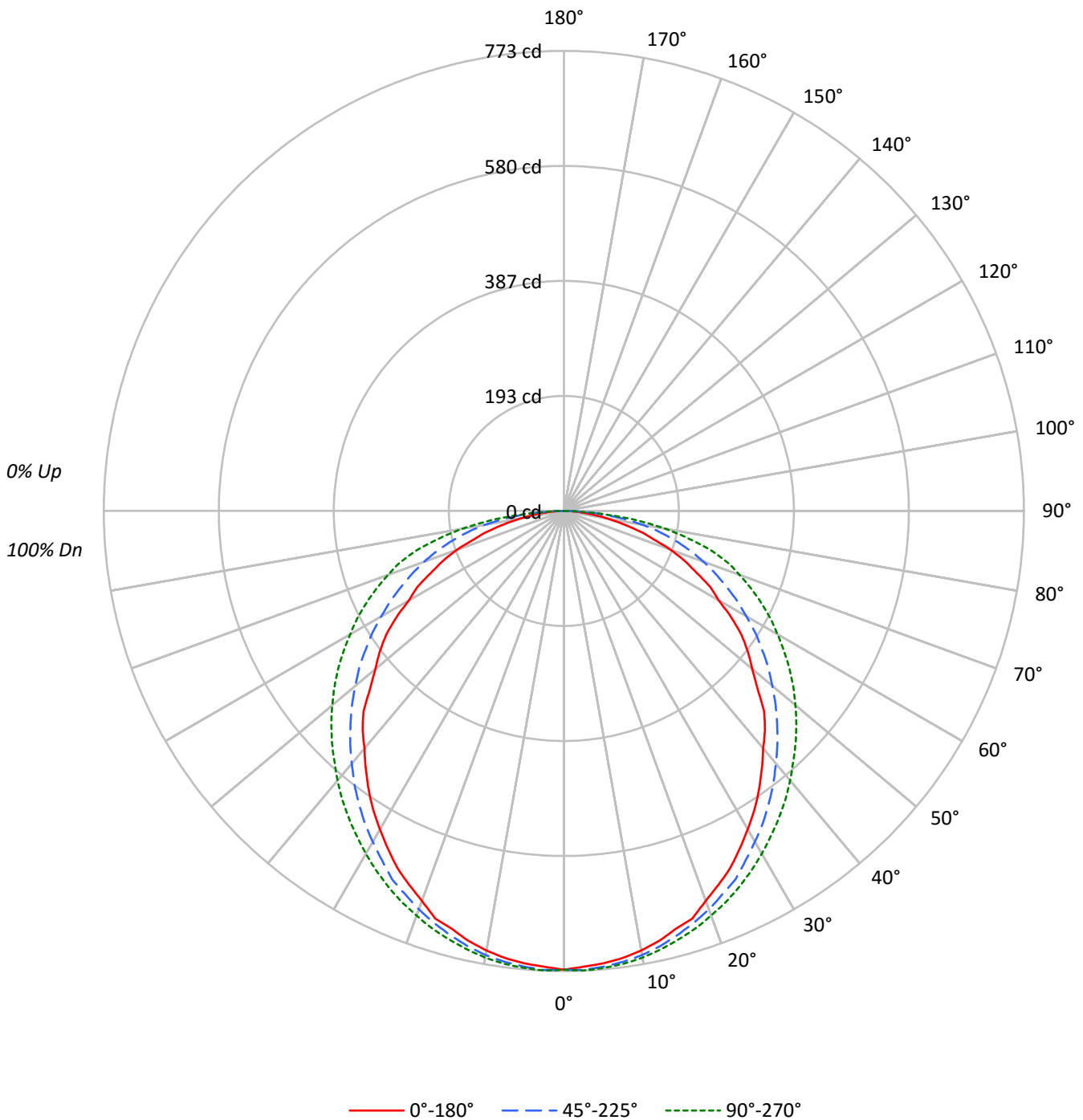
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2074	2074	2074
5°	2061	2076	2082
10°	2049	2070	2082
15°	2025	2055	2077
20°	1996	2040	2072
25°	1965	2027	2070
30°	1920	1995	2067
35°	1878	1972	2069
40°	1831	1946	2078
45°	1811	1929	2096
50°	1731	1914	2126
55°	1712	1909	2171
60°	1615	1905	2231
65°	1568	1918	2331
70°	1505	1964	2474
75°	1371	2023	2664
80°	1176	2095	2692
85°	951	2004	2309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.9	3.2
10°-20°	208.0	9.1
20°-30°	313.1	13.6
30°-40°	375.8	16.4
40°-50°	392.8	17.1
50°-60°	366.0	15.9
60°-70°	300.2	13.1
70°-80°	202.3	8.8
80°-90°	65.9	2.9
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°	594.1	25.9
0°-40°	969.8	42.2
0°-60°	1728.6	75.3
0°-90°	2297.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2297.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	771	771	771	771	771	
5°	763	765	768	770	771	72
15°	727	731	738	744	745	205
25°	662	666	683	693	697	304
35°	572	579	600	621	630	357
45°	476	479	507	538	551	364
55°	365	372	407	445	463	323
65°	246	257	301	345	366	245
75°	132	146	195	239	256	139
85°	31	44	65	76	75	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	770.7	770.7	770.7	770.7	770.7
2.5°	766.3	768.5	771.8	772.9	772.9
5°	763.0	765.2	768.5	769.6	770.7
7.5°	757.5	759.7	764.1	766.3	767.4
10°	749.8	752.0	757.5	760.8	761.9
12.5°	739.9	742.1	748.7	753.1	754.2
15°	726.7	731.1	737.7	744.3	745.4
17.5°	717.9	716.8	725.6	733.3	735.5
20°	697.0	702.5	712.4	721.2	723.4
22.5°	679.4	683.8	697.0	706.9	711.3
25°	661.8	666.2	682.7	692.6	697.0
27.5°	639.8	646.4	661.8	676.1	681.6
30°	617.8	624.4	642.0	658.5	665.1
32.5°	595.9	603.6	622.2	639.8	647.5
35°	571.7	579.4	600.3	621.1	629.9
37.5°	546.4	556.3	578.3	601.4	611.3
40°	521.1	531.0	554.1	580.5	591.5
42.5°	500.2	504.6	531.0	559.6	570.6
45°	476.0	479.3	506.8	537.6	550.8
47.5°	440.9	452.9	482.6	516.7	529.9
50°	413.4	426.6	457.3	493.6	507.9
52.5°	390.3	399.1	433.2	469.4	485.9
55°	365.0	371.6	406.8	445.2	462.8
57.5°	334.2	346.3	381.5	421.1	438.7
60°	300.1	315.5	354.0	396.9	414.5
62.5°	278.1	286.9	328.7	371.6	391.4
65°	246.3	257.3	301.2	345.2	366.1
67.5°	219.9	230.9	275.9	319.9	340.8
70°	191.3	202.3	249.6	293.5	314.4
72.5°	158.3	173.7	223.2	267.1	289.1
75°	131.9	146.2	194.6	238.6	256.2
77.5°	102.2	120.9	166.0	202.3	215.5
80°	75.9	94.5	135.2	161.6	173.7
82.5°	51.7	70.4	101.1	120.9	127.5
85°	30.8	44.0	64.9	75.9	74.8
87.5°	14.3	18.7	26.4	26.4	25.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)