

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: P312787

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CP250-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: P312787
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB 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: 2139.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

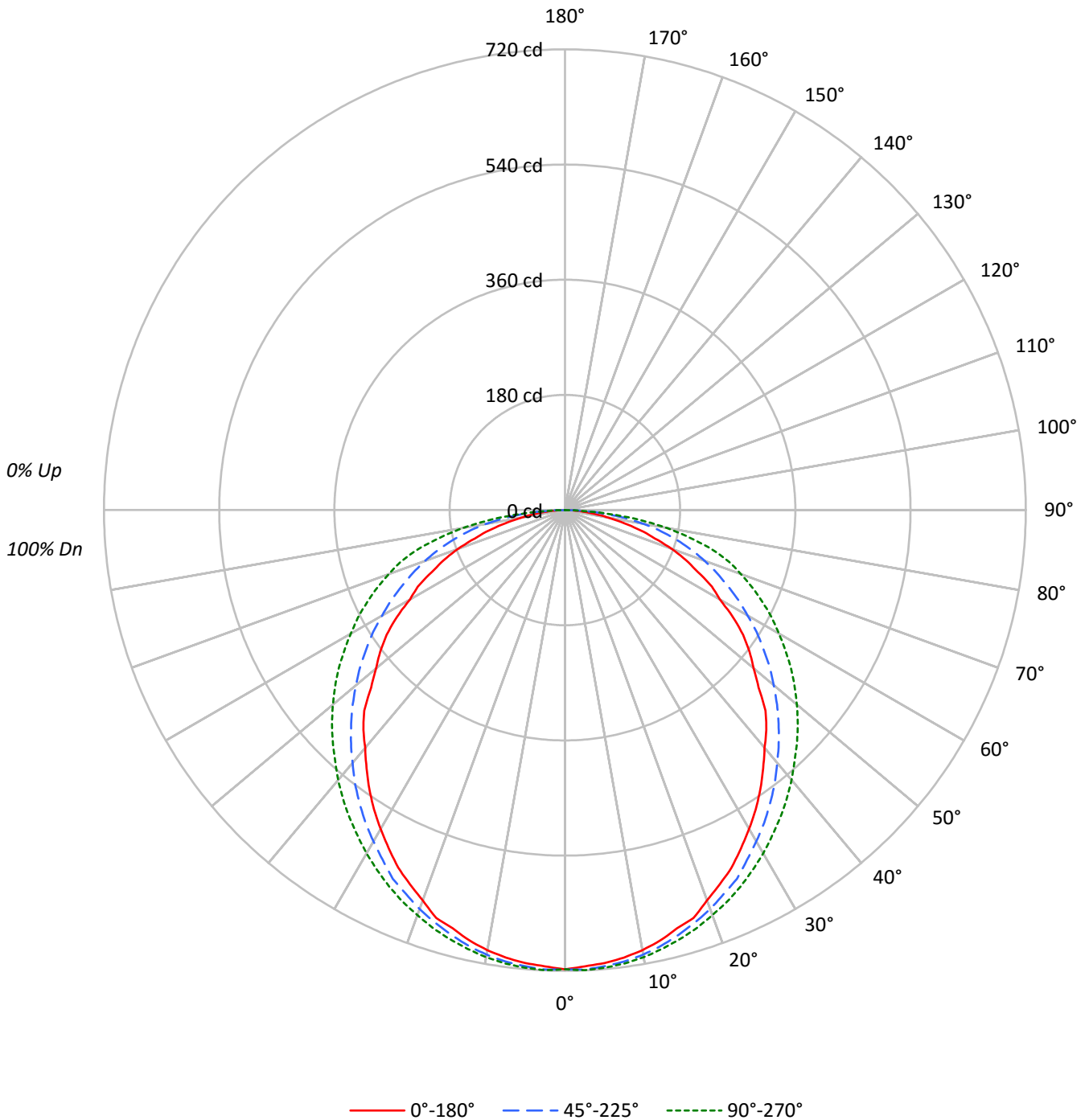
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1931	1931	1931
5°	1919	1933	1939
10°	1908	1927	1939
15°	1885	1914	1934
20°	1859	1900	1929
25°	1830	1888	1927
30°	1788	1858	1925
35°	1749	1836	1927
40°	1705	1813	1935
45°	1687	1796	1952
50°	1611	1783	1980
55°	1595	1777	2022
60°	1504	1774	2077
65°	1460	1786	2171
70°	1401	1828	2304
75°	1278	1884	2480
80°	1094	1951	2507
85°	886	1865	2149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	3.2
10°-20°	193.7	9.1
20°-30°	291.6	13.6
30°-40°	349.9	16.4
40°-50°	365.8	17.1
50°-60°	340.8	15.9
60°-70°	279.6	13.1
70°-80°	188.4	8.8
80°-90°	61.4	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°	553.2	25.9
0°-40°	903.1	42.2
0°-60°	1609.7	75.3
0°-90°	2139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2139.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	710	712	716	717	718	67
15°	677	681	687	693	694	191
25°	616	620	636	645	649	283
35°	532	540	559	578	587	333
45°	443	446	472	501	513	339
55°	340	346	379	415	431	301
65°	229	240	280	322	341	228
75°	123	136	181	222	238	129
85°	29	41	60	71	70	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	717.7	717.7	717.7	717.7	717.7
2.5°	713.6	715.6	718.7	719.7	719.7
5°	710.5	712.5	715.6	716.6	717.7
7.5°	705.4	707.4	711.5	713.6	714.6
10°	698.2	700.2	705.4	708.4	709.5
12.5°	689.0	691.0	697.2	701.3	702.3
15°	676.7	680.8	686.9	693.1	694.1
17.5°	668.5	667.5	675.7	682.8	684.9
20°	649.1	654.2	663.4	671.6	673.6
22.5°	632.7	636.8	649.1	658.3	662.4
25°	616.3	620.4	635.8	645.0	649.1
27.5°	595.8	602.0	616.3	629.6	634.7
30°	575.4	581.5	597.9	613.2	619.4
32.5°	554.9	562.0	579.4	595.8	603.0
35°	532.4	539.5	559.0	578.4	586.6
37.5°	508.8	518.0	538.5	560.0	569.2
40°	485.3	494.5	516.0	540.5	550.8
42.5°	465.8	469.9	494.5	521.1	531.3
45°	443.3	446.4	472.0	500.6	512.9
47.5°	410.5	421.8	449.4	481.2	493.5
50°	384.9	397.2	425.9	459.7	473.0
52.5°	363.4	371.6	403.4	437.1	452.5
55°	339.9	346.0	378.8	414.6	431.0
57.5°	311.2	322.5	355.2	392.1	408.5
60°	279.5	293.8	329.6	369.6	386.0
62.5°	259.0	267.2	306.1	346.0	364.5
65°	229.3	239.6	280.5	321.5	340.9
67.5°	204.8	215.0	257.0	297.9	317.4
70°	178.1	188.4	232.4	273.3	292.8
72.5°	147.4	161.8	207.8	248.8	269.2
75°	122.9	136.2	181.2	222.2	238.5
77.5°	95.2	112.6	154.6	188.4	200.7
80°	70.6	88.0	125.9	150.5	161.8
82.5°	48.1	65.5	94.2	112.6	118.8
85°	28.7	41.0	60.4	70.6	69.6
87.5°	13.3	17.4	24.6	24.6	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)