

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: P312814

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-CP250-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: P312814
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: 22FCZ2-29HE-UNV-L83050-CP250-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 2525.0 lumens
Efficiency: N/A
Efficacy: 107.4 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

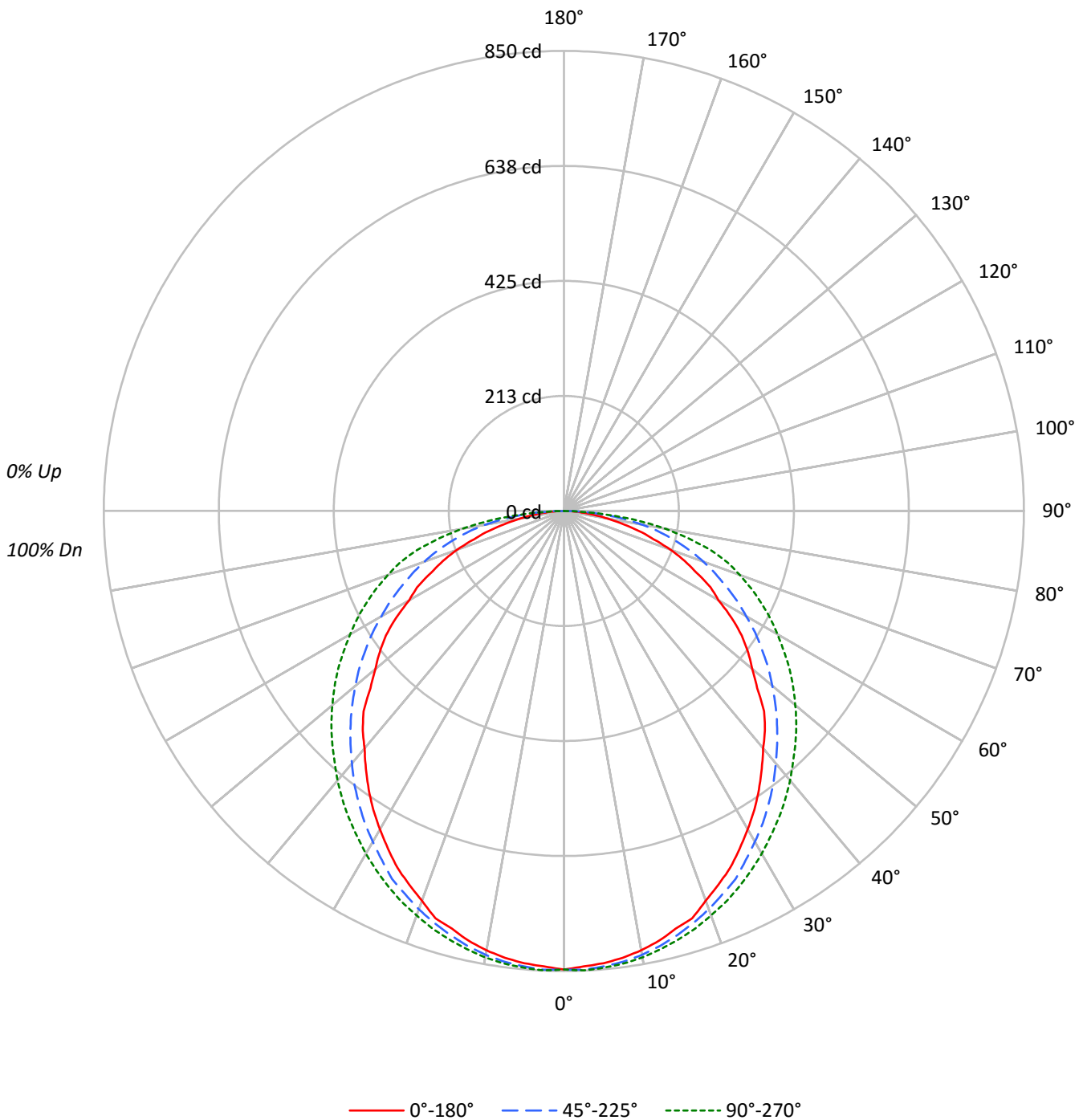
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2280	2280	2280
5°	2266	2282	2289
10°	2252	2275	2288
15°	2225	2259	2283
20°	2194	2243	2277
25°	2160	2228	2275
30°	2110	2193	2272
35°	2064	2167	2275
40°	2012	2140	2284
45°	1991	2120	2304
50°	1902	2105	2337
55°	1882	2098	2387
60°	1776	2094	2452
65°	1724	2108	2562
70°	1655	2158	2719
75°	1508	2224	2928
80°	1292	2303	2958
85°	1044	2201	2538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	3.2
10°-20°	228.7	9.1
20°-30°	344.2	13.6
30°-40°	413.1	16.4
40°-50°	431.7	17.1
50°-60°	402.4	15.9
60°-70°	330.0	13.1
70°-80°	222.4	8.8
80°-90°	72.4	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°	653.0	25.9
0°-40°	1066.1	42.2
0°-60°	1900.2	75.3
0°-90°	2525.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2525.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	847	847	847	847	847	
5°	839	841	845	846	847	80
15°	799	804	811	818	819	226
25°	728	732	750	761	766	334
35°	628	637	660	683	692	393
45°	523	527	557	591	606	400
55°	401	408	447	489	509	356
65°	271	283	331	380	402	269
75°	145	161	214	262	282	152
85°	34	48	71	83	82	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	847.2	847.2	847.2	847.2	847.2
2.5°	842.3	844.7	848.4	849.6	849.6
5°	838.7	841.1	844.7	846.0	847.2
7.5°	832.7	835.1	839.9	842.3	843.5
10°	824.2	826.6	832.7	836.3	837.5
12.5°	813.3	815.7	823.0	827.8	829.0
15°	798.8	803.7	810.9	818.2	819.4
17.5°	789.2	787.9	797.6	806.1	808.5
20°	766.2	772.2	783.1	792.8	795.2
22.5°	746.9	751.7	766.2	777.1	781.9
25°	727.5	732.4	750.5	761.4	766.2
27.5°	703.3	710.6	727.5	743.2	749.3
30°	679.2	686.4	705.8	723.9	731.1
32.5°	655.0	663.5	684.0	703.3	711.8
35°	628.4	636.9	659.8	682.8	692.5
37.5°	600.6	611.5	635.7	661.0	671.9
40°	572.8	583.7	609.1	638.1	650.2
42.5°	549.9	554.7	583.7	615.1	627.2
45°	523.3	526.9	557.1	591.0	605.5
47.5°	484.6	497.9	530.5	568.0	582.5
50°	454.4	468.9	502.7	542.6	558.3
52.5°	429.0	438.7	476.1	516.0	534.2
55°	401.2	408.5	447.1	489.4	508.8
57.5°	367.4	380.7	419.3	462.9	482.2
60°	329.9	346.8	389.1	436.3	455.6
62.5°	305.8	315.4	361.3	408.5	430.2
65°	270.7	282.8	331.1	379.5	402.4
67.5°	241.7	253.8	303.3	351.7	374.6
70°	210.3	222.4	274.3	322.7	345.6
72.5°	174.0	190.9	245.3	293.7	317.8
75°	145.0	160.7	213.9	262.2	281.6
77.5°	112.4	132.9	182.5	222.4	236.9
80°	83.4	103.9	148.6	177.6	190.9
82.5°	56.8	77.3	111.2	132.9	140.2
85°	33.8	48.3	71.3	83.4	82.2
87.5°	15.7	20.5	29.0	29.0	27.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)