

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: P312750

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-CP125-W2A-U-3000K**

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: P312750
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: 22FCZ2-20HE-UNV-L83050-CP125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB 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: 1796.0 lumens
Efficiency: N/A
Efficacy: 107.5 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

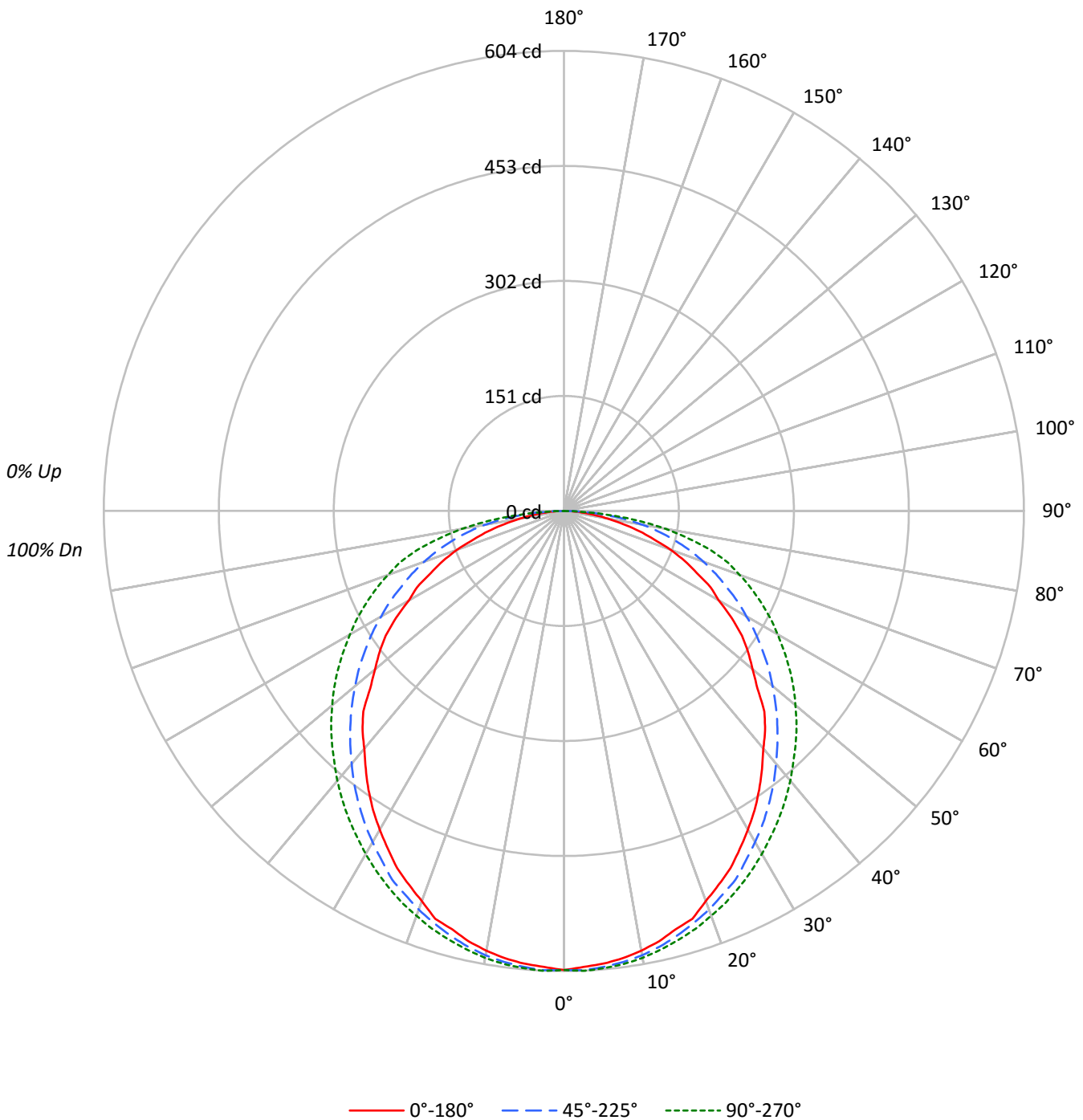
Input Watts (W): 16.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1622	1622	1622
5°	1612	1623	1628
10°	1602	1618	1628
15°	1583	1607	1624
20°	1561	1595	1620
25°	1537	1585	1618
30°	1501	1560	1616
35°	1468	1542	1618
40°	1431	1522	1625
45°	1416	1508	1639
50°	1353	1497	1662
55°	1339	1492	1698
60°	1263	1490	1744
65°	1226	1500	1822
70°	1177	1535	1934
75°	1073	1581	2083
80°	919	1638	2104
85°	744	1565	1806



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.0	3.2
10°-20°	162.7	9.1
20°-30°	244.8	13.6
30°-40°	293.8	16.4
40°-50°	307.1	17.1
50°-60°	286.2	15.9
60°-70°	234.7	13.1
70°-80°	158.2	8.8
80°-90°	51.5	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°	464.5	25.9
0°-40°	758.3	42.2
0°-60°	1351.6	75.3
0°-90°	1796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1796.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	603	603	603	603	603	
5°	597	598	601	602	603	57
15°	568	572	577	582	583	161
25°	518	521	534	542	545	238
35°	447	453	469	486	492	279
45°	372	375	396	420	431	284
55°	285	290	318	348	362	253
65°	192	201	236	270	286	192
75°	103	114	152	186	200	108
85°	24	34	51	59	58	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	602.6	602.6	602.6	602.6	602.6
2.5°	599.1	600.9	603.4	604.3	604.3
5°	596.6	598.3	600.9	601.7	602.6
7.5°	592.3	594.0	597.4	599.1	600.0
10°	586.2	588.0	592.3	594.8	595.7
12.5°	578.5	580.2	585.4	588.8	589.7
15°	568.2	571.6	576.8	581.9	582.8
17.5°	561.3	560.5	567.3	573.3	575.1
20°	545.0	549.3	557.0	563.9	565.6
22.5°	531.2	534.7	545.0	552.7	556.2
25°	517.5	520.9	533.8	541.5	545.0
27.5°	500.3	505.4	517.5	528.6	532.9
30°	483.1	488.2	502.0	514.9	520.1
32.5°	465.9	471.9	486.5	500.3	506.3
35°	447.0	453.0	469.3	485.7	492.5
37.5°	427.2	435.0	452.1	470.2	477.9
40°	407.4	415.2	433.2	453.9	462.5
42.5°	391.1	394.6	415.2	437.5	446.1
45°	372.2	374.8	396.3	420.3	430.7
47.5°	344.7	354.2	377.4	404.0	414.3
50°	323.2	333.5	357.6	386.0	397.1
52.5°	305.2	312.0	338.7	367.0	379.9
55°	285.4	290.5	318.0	348.1	361.9
57.5°	261.3	270.8	298.3	329.2	343.0
60°	234.7	246.7	276.8	310.3	324.1
62.5°	217.5	224.4	257.0	290.5	306.0
65°	192.5	201.1	235.5	269.9	286.2
67.5°	171.9	180.5	215.8	250.1	266.5
70°	149.6	158.2	195.1	229.5	245.8
72.5°	123.8	135.8	174.5	208.9	226.1
75°	103.2	114.3	152.1	186.5	200.3
77.5°	79.9	94.6	129.8	158.2	168.5
80°	59.3	73.9	105.7	126.4	135.8
82.5°	40.4	55.0	79.1	94.6	99.7
85°	24.1	34.4	50.7	59.3	58.5
87.5°	11.2	14.6	20.6	20.6	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)