

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: P308612

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-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: P308612
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-L82765-CA125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" 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: 1935.0 lumens
Efficiency: N/A
Efficacy: 114.5 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

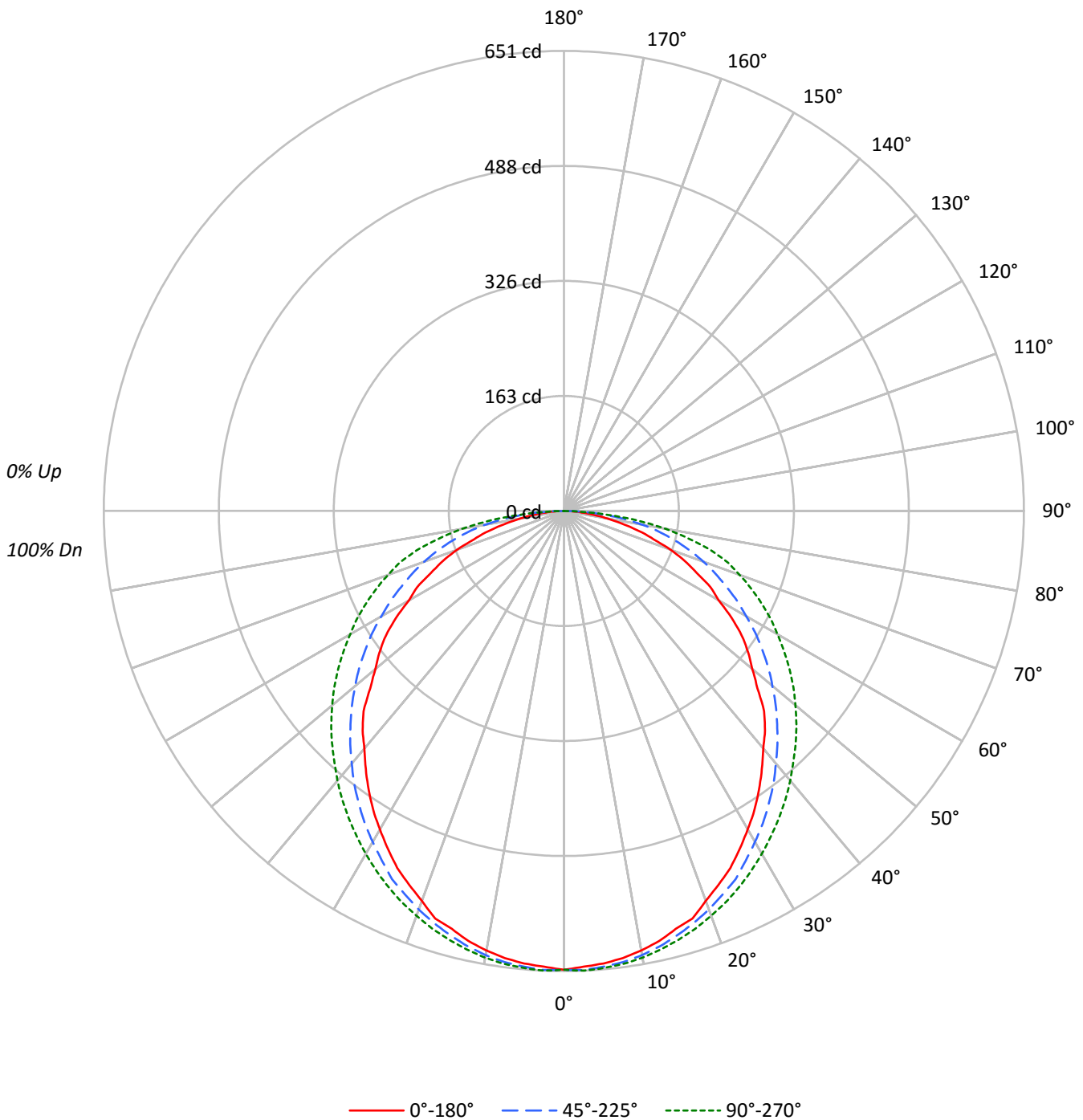
Input Watts (W): 16.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82					82			
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67					67			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56					56			
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36					36			
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32					32			
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25					25			
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1747	1747	1747
5°	1736	1749	1754
10°	1726	1744	1754
15°	1706	1731	1749
20°	1682	1718	1745
25°	1655	1708	1743
30°	1617	1681	1741
35°	1582	1661	1743
40°	1542	1640	1750
45°	1526	1625	1766
50°	1458	1613	1791
55°	1443	1608	1829
60°	1361	1605	1879
65°	1321	1616	1964
70°	1268	1654	2084
75°	1155	1704	2244
80°	990	1765	2267
85°	800	1686	1945



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	3.2
10°-20°	175.2	9.1
20°-30°	263.8	13.6
30°-40°	316.6	16.4
40°-50°	330.9	17.1
50°-60°	308.3	15.9
60°-70°	252.9	13.1
70°-80°	170.4	8.8
80°-90°	55.5	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°	500.4	25.9
0°-40°	817.0	42.2
0°-60°	1456.2	75.3
0°-90°	1935.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1935.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	649	649	649	649	649	
5°	643	645	647	648	649	61
15°	612	616	621	627	628	173
25°	558	561	575	584	587	256
35°	482	488	506	523	531	301
45°	401	404	427	453	464	306
55°	308	313	343	375	390	272
65°	208	217	254	291	308	206
75°	111	123	164	201	216	117
85°	26	37	55	64	63	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	649.2	649.2	649.2	649.2	649.2
2.5°	645.5	647.4	650.1	651.1	651.1
5°	642.7	644.6	647.4	648.3	649.2
7.5°	638.1	639.9	643.7	645.5	646.4
10°	631.6	633.5	638.1	640.9	641.8
12.5°	623.3	625.1	630.7	634.4	635.3
15°	612.2	615.9	621.4	627.0	627.9
17.5°	604.8	603.8	611.2	617.7	619.6
20°	587.2	591.8	600.1	607.5	609.4
22.5°	572.3	576.0	587.2	595.5	599.2
25°	557.5	561.2	575.1	583.5	587.2
27.5°	539.0	544.6	557.5	569.6	574.2
30°	520.5	526.0	540.9	554.7	560.3
32.5°	502.0	508.4	524.2	539.0	545.5
35°	481.6	488.1	505.7	523.3	530.7
37.5°	460.3	468.6	487.1	506.6	514.9
40°	439.0	447.3	466.8	489.0	498.3
42.5°	421.4	425.1	447.3	471.4	480.7
45°	401.0	403.8	426.9	452.9	464.0
47.5°	371.4	381.6	406.6	435.3	446.4
50°	348.2	359.3	385.3	415.8	427.9
52.5°	328.8	336.2	364.9	395.5	409.3
55°	307.5	313.0	342.7	375.1	389.9
57.5°	281.5	291.7	321.4	354.7	369.5
60°	252.8	265.8	298.2	334.3	349.1
62.5°	234.3	241.7	276.9	313.0	329.7
65°	207.5	216.7	253.8	290.8	308.4
67.5°	185.2	194.5	232.5	269.5	287.1
70°	161.1	170.4	210.2	247.3	264.9
72.5°	133.4	146.3	188.0	225.0	243.6
75°	111.1	123.2	163.9	201.0	215.8
77.5°	86.1	101.9	139.8	170.4	181.5
80°	63.9	79.6	113.9	136.1	146.3
82.5°	43.5	59.3	85.2	101.9	107.4
85°	25.9	37.0	54.6	63.9	63.0
87.5°	12.0	15.7	22.2	22.2	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)