

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: P308641

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-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: P308641
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-CP250-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 1859.0 lumens
Efficiency: N/A
Efficacy: 108.7 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

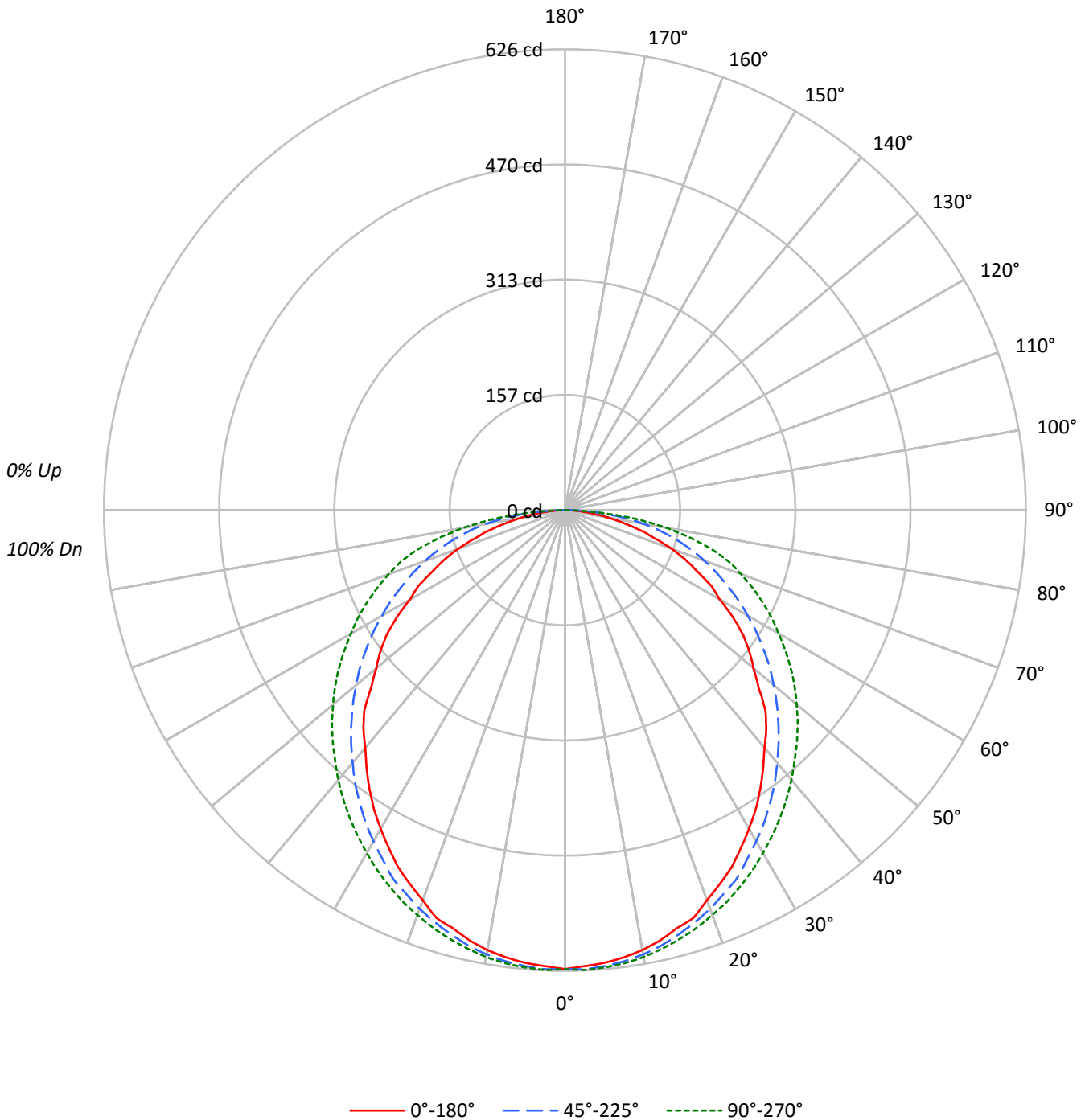
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1678	1678	1678
5°	1668	1680	1685
10°	1658	1675	1685
15°	1638	1663	1680
20°	1615	1651	1677
25°	1590	1640	1675
30°	1554	1615	1673
35°	1520	1596	1675
40°	1481	1575	1682
45°	1466	1561	1697
50°	1400	1549	1721
55°	1386	1544	1757
60°	1307	1542	1805
65°	1269	1552	1887
70°	1218	1589	2002
75°	1110	1638	2155
80°	951	1695	2179
85°	769	1621	1868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.0	3.2
10°-20°	168.4	9.1
20°-30°	253.4	13.6
30°-40°	304.1	16.4
40°-50°	317.9	17.1
50°-60°	296.2	15.9
60°-70°	243.0	13.1
70°-80°	163.7	8.8
80°-90°	53.3	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°	480.8	25.9
0°-40°	784.9	42.2
0°-60°	1399.0	75.3
0°-90°	1859.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1859.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	624	624	624	624	624	
5°	618	619	622	623	624	59
15°	588	592	597	602	603	166
25°	536	539	552	560	564	246
35°	463	469	486	503	510	289
45°	385	388	410	435	446	294
55°	295	301	329	360	375	262
65°	199	208	244	279	296	198
75°	107	118	158	193	207	112
85°	25	36	52	61	60	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	623.7	623.7	623.7	623.7	623.7
2.5°	620.2	621.9	624.6	625.5	625.5
5°	617.5	619.3	621.9	622.8	623.7
7.5°	613.0	614.8	618.4	620.2	621.0
10°	606.8	608.6	613.0	615.7	616.6
12.5°	598.8	600.6	605.9	609.5	610.4
15°	588.1	591.7	597.0	602.4	603.2
17.5°	581.0	580.1	587.2	593.5	595.2
20°	564.1	568.5	576.6	583.7	585.5
22.5°	549.9	553.4	564.1	572.1	575.7
25°	535.6	539.2	552.5	560.5	564.1
27.5°	517.8	523.2	535.6	547.2	551.6
30°	500.0	505.4	519.6	533.0	538.3
32.5°	482.2	488.5	503.6	517.8	524.1
35°	462.7	468.9	485.8	502.7	509.8
37.5°	442.2	450.2	468.0	486.7	494.7
40°	421.7	429.7	448.4	469.8	478.7
42.5°	404.8	408.4	429.7	452.9	461.8
45°	385.3	387.9	410.2	435.1	445.8
47.5°	356.8	366.6	390.6	418.2	428.9
50°	334.5	345.2	370.1	399.5	411.1
52.5°	315.9	323.0	350.6	379.9	393.3
55°	295.4	300.7	329.2	360.3	374.6
57.5°	270.5	280.3	308.7	340.8	355.0
60°	242.9	255.4	286.5	321.2	335.4
62.5°	225.1	232.2	266.0	300.7	316.7
65°	199.3	208.2	243.8	279.4	296.3
67.5°	177.9	186.8	223.3	258.9	275.8
70°	154.8	163.7	202.0	237.6	254.5
72.5°	128.1	140.6	180.6	216.2	234.0
75°	106.8	118.3	157.5	193.1	207.3
77.5°	82.7	97.9	134.4	163.7	174.4
80°	61.4	76.5	109.4	130.8	140.6
82.5°	41.8	56.9	81.9	97.9	103.2
85°	24.9	35.6	52.5	61.4	60.5
87.5°	11.6	15.1	21.4	21.4	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)