

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: P308187

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-HRP-CP250-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: P308187
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
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-L82765-HRP-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 1747.0 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

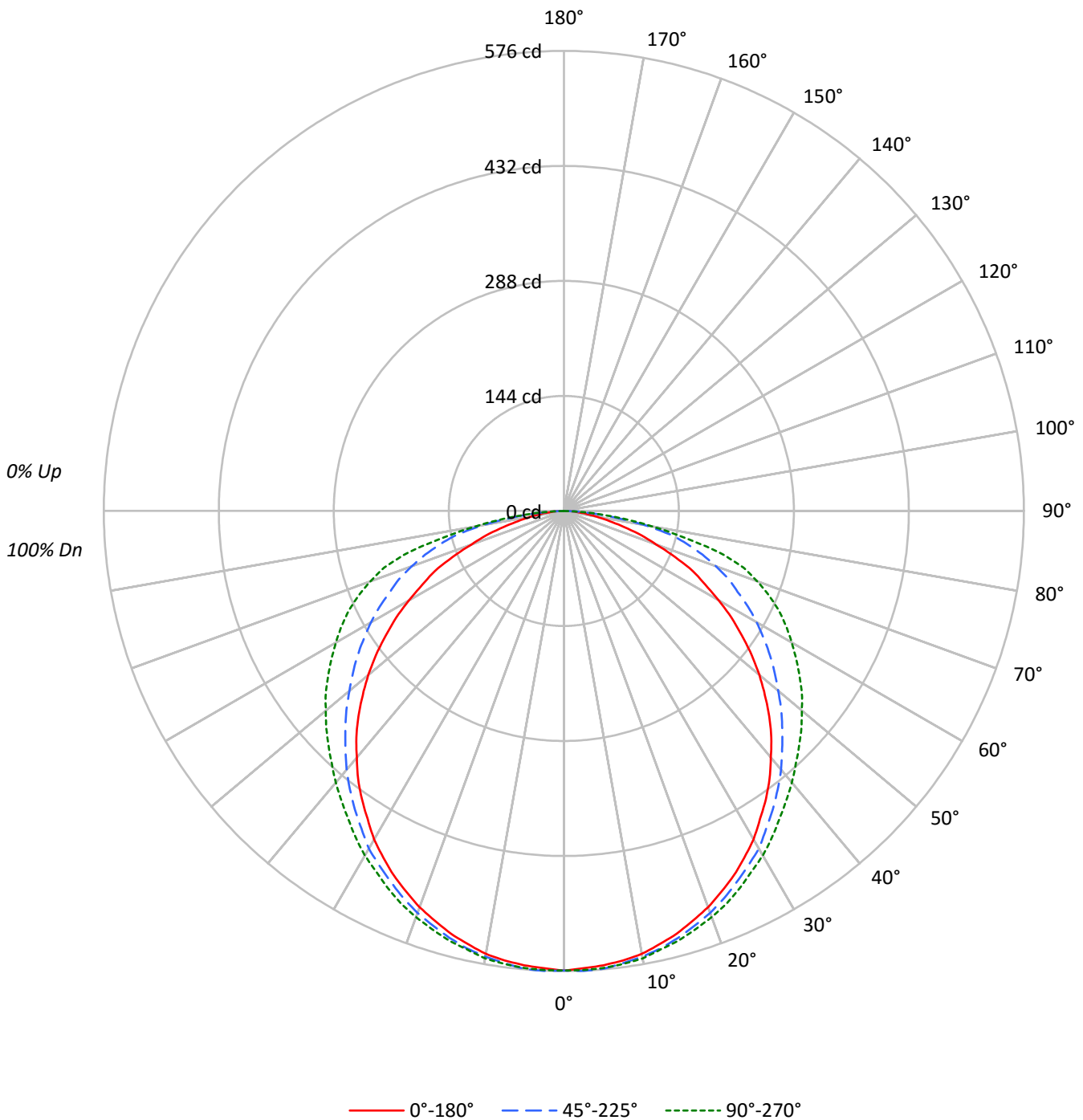
Input Watts (W): 22.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1548	1548	1548
5°	1542	1554	1551
10°	1539	1548	1554
15°	1526	1541	1550
20°	1512	1534	1550
25°	1495	1522	1548
30°	1476	1517	1548
35°	1448	1499	1546
40°	1417	1487	1560
45°	1384	1472	1585
50°	1338	1467	1629
55°	1277	1479	1691
60°	1204	1500	1773
65°	1137	1529	1895
70°	971	1596	2029
75°	813	1661	2109
80°	666	1605	1759
85°	577	1192	1294



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.5	3.1
10°-20°	156.0	8.9
20°-30°	236.4	13.5
30°-40°	285.4	16.3
40°-50°	299.9	17.2
50°-60°	282.2	16.2
60°-70°	235.3	13.5
70°-80°	155.9	8.9
80°-90°	41.5	2.4
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°	446.8	25.6
0°-40°	732.2	41.9
0°-60°	1314.3	75.2
0°-90°	1747.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1747.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	575	575	575	575	575	
5°	571	572	575	575	574	54
15°	548	550	553	555	556	154
25°	504	507	512	519	521	232
35°	441	445	456	466	471	276
45°	364	369	387	407	417	280
55°	272	284	315	347	360	244
65°	178	194	240	280	298	174
75°	78	109	160	193	203	85
85°	19	29	39	42	42	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	575.3	575.3	575.3	575.3	575.3
2.5°	573.1	574.2	576.4	576.4	575.3
5°	570.9	572.0	575.3	575.3	574.2
7.5°	567.6	568.7	570.9	573.1	572.0
10°	563.1	564.2	566.5	568.7	568.7
12.5°	555.4	556.5	560.9	562.0	562.0
15°	547.7	549.9	553.2	555.4	556.5
17.5°	537.8	540.0	544.4	548.8	548.8
20°	527.9	530.1	535.6	540.0	541.1
22.5°	515.8	519.1	524.6	530.1	532.3
25°	503.6	506.9	512.5	519.1	521.3
27.5°	489.3	492.6	500.3	508.0	509.1
30°	475.0	478.3	488.2	494.8	498.1
32.5°	457.3	461.8	471.7	481.6	484.9
35°	440.8	445.2	456.2	466.2	470.6
37.5°	423.2	427.6	439.7	451.8	457.3
40°	403.3	408.9	423.2	436.4	444.1
42.5°	384.6	390.1	404.5	422.1	429.8
45°	363.7	369.2	386.8	406.7	416.6
47.5°	341.6	348.2	369.2	393.4	403.3
50°	319.6	327.3	350.5	378.0	389.0
52.5°	296.5	306.4	332.8	362.6	375.8
55°	272.2	284.3	315.2	347.1	360.4
57.5°	249.1	260.1	296.5	330.6	344.9
60°	223.7	238.0	278.8	314.1	329.5
62.5°	199.5	214.9	260.1	297.6	314.1
65°	178.5	194.0	240.2	279.9	297.6
67.5°	151.0	171.9	223.7	261.2	278.8
70°	123.4	152.1	202.8	241.3	257.9
72.5°	102.5	130.0	181.8	220.4	235.8
75°	78.2	109.1	159.8	192.9	202.8
77.5°	58.4	90.4	136.7	153.2	154.3
80°	43.0	69.4	103.6	109.1	113.5
82.5°	29.8	48.5	67.2	73.8	76.0
85°	18.7	28.7	38.6	41.9	41.9
87.5°	9.9	11.0	13.2	13.2	13.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)