

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: P308729

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CP250-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: P308729
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-L82765-CP250-W2A-U-4000K
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: 2378.0 lumens
Efficiency: N/A
Efficacy: 104.8 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

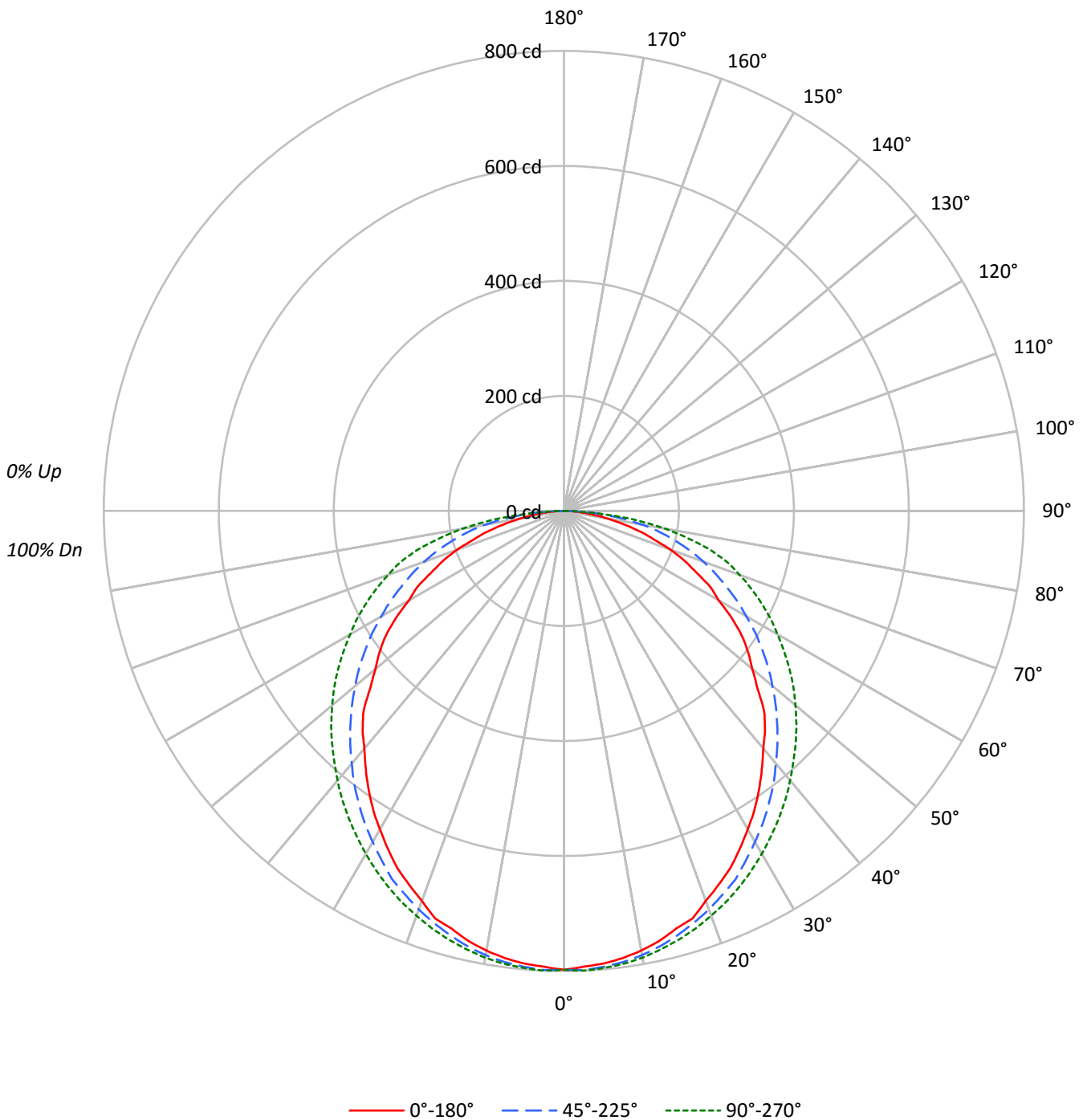
Input Watts (W): 22.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2147	2147	2147
5°	2134	2149	2155
10°	2121	2143	2155
15°	2096	2128	2150
20°	2066	2112	2145
25°	2034	2099	2143
30°	1987	2065	2140
35°	1944	2041	2143
40°	1895	2015	2151
45°	1875	1997	2170
50°	1791	1982	2201
55°	1773	1976	2248
60°	1672	1972	2309
65°	1623	1986	2413
70°	1558	2033	2561
75°	1420	2095	2757
80°	1216	2170	2786
85°	985	2075	2390



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.5	3.2
10°-20°	215.4	9.1
20°-30°	324.1	13.6
30°-40°	389.0	16.4
40°-50°	406.6	17.1
50°-60°	378.9	15.9
60°-70°	310.8	13.1
70°-80°	209.4	8.8
80°-90°	68.2	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°	615.0	25.9
0°-40°	1004.0	42.2
0°-60°	1789.6	75.3
0°-90°	2378.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2378.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	798	798	798	798	798	
5°	790	792	796	797	798	75
15°	752	757	764	770	772	213
25°	685	690	707	717	722	315
35°	592	600	621	643	652	370
45°	493	496	525	557	570	376
55°	378	385	421	461	479	335
65°	255	266	312	357	379	254
75°	137	151	202	247	265	144
85°	32	46	67	78	77	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	797.8	797.8	797.8	797.8	797.8
2.5°	793.3	795.6	799.0	800.1	800.1
5°	789.9	792.1	795.6	796.7	797.8
7.5°	784.2	786.5	791.0	793.3	794.4
10°	776.2	778.5	784.2	787.6	788.7
12.5°	766.0	768.2	775.1	779.6	780.8
15°	752.3	756.9	763.7	770.5	771.7
17.5°	743.2	742.1	751.2	759.1	761.4
20°	721.6	727.3	737.5	746.6	748.9
22.5°	703.4	707.9	721.6	731.8	736.4
25°	685.2	689.7	706.8	717.0	721.6
27.5°	662.4	669.2	685.2	700.0	705.6
30°	639.6	646.5	664.7	681.7	688.6
32.5°	616.9	624.8	644.2	662.4	670.4
35°	591.8	599.8	621.4	643.1	652.2
37.5°	565.7	575.9	598.7	622.6	632.8
40°	539.5	549.7	573.6	600.9	612.3
42.5°	517.9	522.4	549.7	579.3	590.7
45°	492.8	496.2	524.7	556.6	570.2
47.5°	456.4	468.9	499.6	534.9	548.6
50°	427.9	441.6	473.5	511.0	525.8
52.5°	404.0	413.1	448.4	486.0	503.1
55°	377.9	384.7	421.1	460.9	479.2
57.5°	346.0	358.5	394.9	435.9	454.1
60°	310.7	326.6	366.5	410.9	429.1
62.5°	288.0	297.1	340.3	384.7	405.2
65°	254.9	266.3	311.9	357.4	379.0
67.5°	227.6	239.0	285.7	331.2	352.8
70°	198.0	209.4	258.4	303.9	325.5
72.5°	163.9	179.8	231.0	276.6	299.3
75°	136.6	151.4	201.5	247.0	265.2
77.5°	105.8	125.2	171.9	209.4	223.1
80°	78.5	97.9	140.0	167.3	179.8
82.5°	53.5	72.8	104.7	125.2	132.0
85°	31.9	45.5	67.2	78.5	77.4
87.5°	14.8	19.3	27.3	27.3	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)