

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: P308723

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CP187-W2A-U-5500K**

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: P308723
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-CP187-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" 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: 2498.0 lumens
Efficiency: N/A
Efficacy: 108.6 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

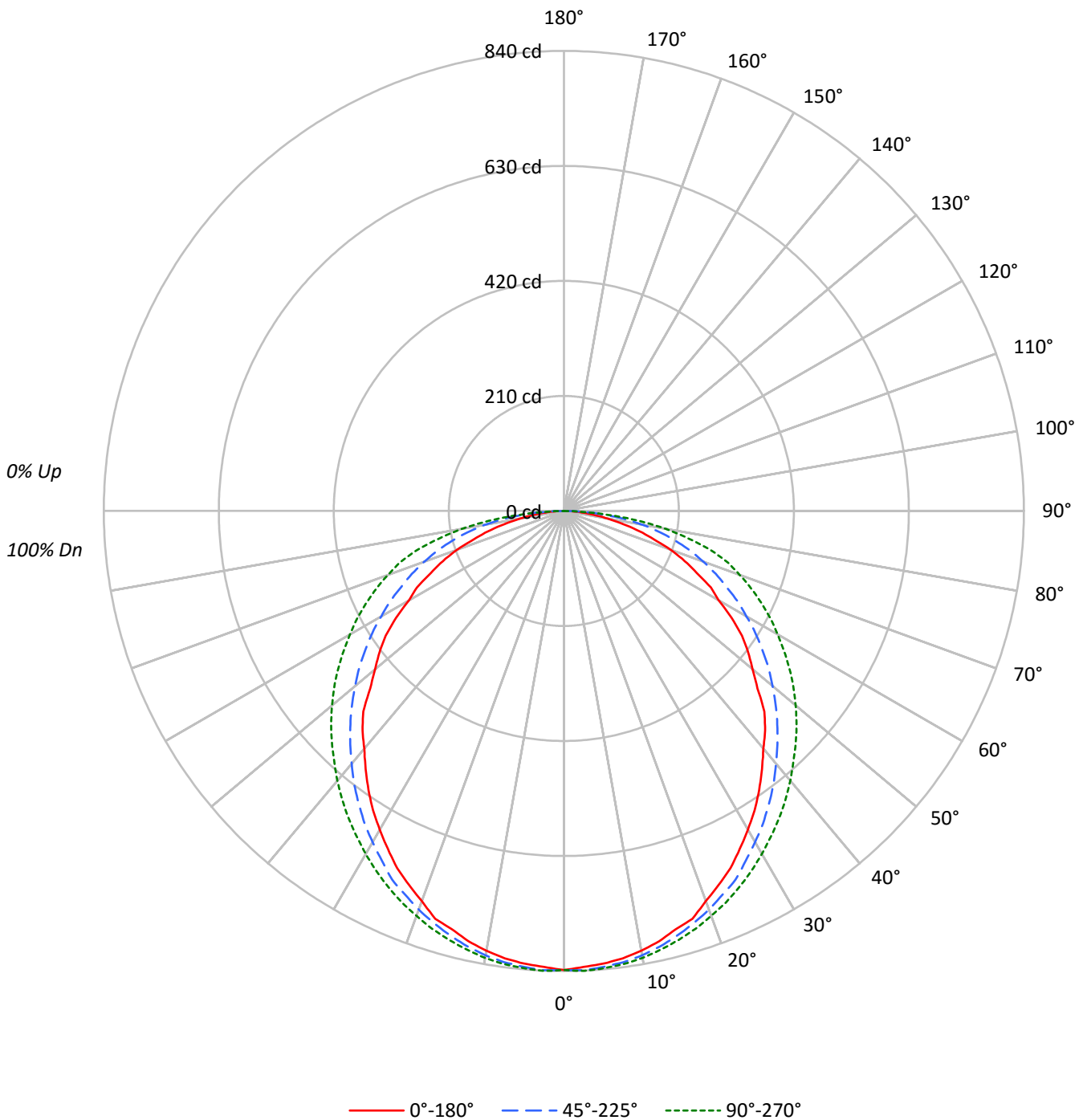
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2255	2255	2255
5°	2241	2257	2264
10°	2228	2251	2264
15°	2202	2235	2258
20°	2171	2218	2253
25°	2137	2205	2251
30°	2088	2169	2247
35°	2042	2144	2251
40°	1991	2117	2259
45°	1970	2098	2280
50°	1882	2082	2313
55°	1862	2076	2361
60°	1757	2072	2426
65°	1705	2086	2535
70°	1637	2135	2690
75°	1492	2200	2897
80°	1278	2280	2927
85°	1034	2177	2510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.3	3.2
10°-20°	226.2	9.1
20°-30°	340.5	13.6
30°-40°	408.7	16.4
40°-50°	427.1	17.1
50°-60°	398.1	15.9
60°-70°	326.5	13.1
70°-80°	220.0	8.8
80°-90°	71.6	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°	646.0	25.9
0°-40°	1054.7	42.2
0°-60°	1879.9	75.3
0°-90°	2498.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2498.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	830	832	836	837	838	79
15°	790	795	802	809	811	223
25°	720	724	742	753	758	331
35°	622	630	653	676	685	389
45°	518	521	551	585	599	395
55°	397	404	442	484	503	352
65°	268	280	328	375	398	266
75°	144	159	212	259	279	151
85°	34	48	70	82	81	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	838.1	838.1	838.1	838.1	838.1
2.5°	833.3	835.7	839.3	840.5	840.5
5°	829.7	832.1	835.7	836.9	838.1
7.5°	823.8	826.1	830.9	833.3	834.5
10°	815.4	817.8	823.8	827.3	828.5
12.5°	804.6	807.0	814.2	819.0	820.2
15°	790.3	795.1	802.2	809.4	810.6
17.5°	780.7	779.5	789.1	797.5	799.8
20°	758.0	764.0	774.7	784.3	786.7
22.5°	738.9	743.6	758.0	768.8	773.5
25°	719.7	724.5	742.5	753.2	758.0
27.5°	695.8	703.0	719.7	735.3	741.3
30°	671.9	679.1	698.2	716.2	723.3
32.5°	648.0	656.4	676.7	695.8	704.2
35°	621.7	630.1	652.8	675.5	685.1
37.5°	594.2	605.0	628.9	654.0	664.7
40°	566.7	577.5	602.6	631.3	643.2
42.5°	544.0	548.8	577.5	608.5	620.5
45°	517.7	521.3	551.2	584.6	599.0
47.5°	479.4	492.6	524.9	561.9	576.3
50°	449.5	463.9	497.4	536.8	552.4
52.5°	424.4	434.0	471.1	510.5	528.4
55°	396.9	404.1	442.4	484.2	503.3
57.5°	363.5	376.6	414.9	457.9	477.0
60°	326.4	343.1	385.0	431.6	450.7
62.5°	302.5	312.0	357.5	404.1	425.6
65°	267.8	279.8	327.6	375.4	398.1
67.5°	239.1	251.1	300.1	347.9	370.6
70°	208.0	220.0	271.4	319.2	341.9
72.5°	172.2	188.9	242.7	290.5	314.4
75°	143.5	159.0	211.6	259.4	278.6
77.5°	111.2	131.5	180.5	220.0	234.3
80°	82.5	102.8	147.1	175.7	188.9
82.5°	56.2	76.5	110.0	131.5	138.7
85°	33.5	47.8	70.5	82.5	81.3
87.5°	15.5	20.3	28.7	28.7	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)