

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: P308269

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-3500K**

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: P308269
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: 22FCZ2-39HE-UNV-L82765-HRP-CP187-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 2518.0 lumens
Efficiency: N/A
Efficacy: 77.2 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

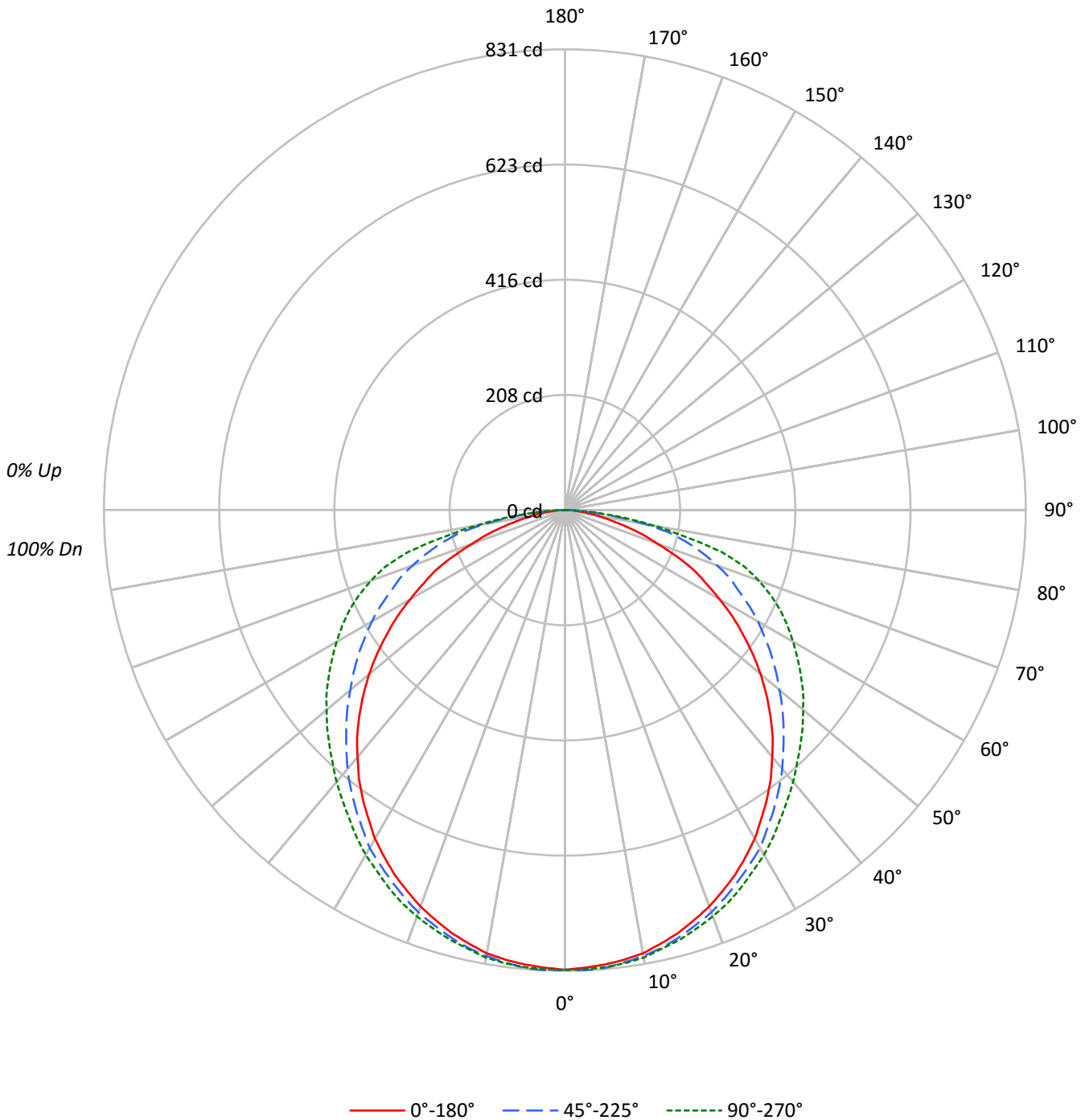
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	83	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°	2231	2231	2231
5°	2223	2240	2236
10°	2218	2231	2240
15°	2199	2221	2235
20°	2179	2211	2233
25°	2155	2193	2231
30°	2127	2187	2231
35°	2087	2160	2228
40°	2042	2142	2249
45°	1995	2122	2285
50°	1928	2115	2347
55°	1841	2131	2437
60°	1735	2163	2556
65°	1638	2205	2731
70°	1400	2300	2924
75°	1173	2394	3039
80°	959	2314	2535
85°	834	1717	1865



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.6	3.1
10°-20°	224.8	8.9
20°-30°	340.7	13.5
30°-40°	411.4	16.3
40°-50°	432.2	17.2
50°-60°	406.7	16.2
60°-70°	339.1	13.5
70°-80°	224.7	8.9
80°-90°	59.9	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°	644.0	25.6
0°-40°	1055.4	41.9
0°-60°	1894.3	75.2
0°-90°	2518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	823	824	829	829	828	78
15°	789	793	797	801	802	223
25°	726	731	739	748	751	334
35°	635	642	658	672	678	397
45°	524	532	558	586	600	404
55°	392	410	454	500	519	351
65°	257	280	346	404	429	250
75°	113	157	230	278	292	122
85°	27	41	56	60	60	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	829.1	829.1	829.1	829.1	829.1
2.5°	826.0	827.6	830.7	830.7	829.1
5°	822.8	824.4	829.1	829.1	827.6
7.5°	818.0	819.6	822.8	826.0	824.4
10°	811.7	813.3	816.4	819.6	819.6
12.5°	800.6	802.1	808.5	810.1	810.1
15°	789.4	792.6	797.4	800.6	802.1
17.5°	775.1	778.3	784.7	791.0	791.0
20°	760.8	764.0	772.0	778.3	779.9
22.5°	743.4	748.1	756.1	764.0	767.2
25°	725.9	730.7	738.6	748.1	751.3
27.5°	705.3	710.0	721.1	732.3	733.8
30°	684.6	689.4	703.7	713.2	718.0
32.5°	659.2	665.5	679.8	694.1	698.9
35°	635.4	641.7	657.6	671.9	678.3
37.5°	609.9	616.3	633.8	651.2	659.2
40°	581.4	589.3	609.9	629.0	640.1
42.5°	554.4	562.3	582.9	608.4	619.5
45°	524.2	532.1	557.5	586.1	600.4
47.5°	492.4	501.9	532.1	567.1	581.4
50°	460.6	471.8	505.1	544.8	560.7
52.5°	427.3	441.6	479.7	522.6	541.6
55°	392.3	409.8	454.3	500.3	519.4
57.5°	359.0	374.9	427.3	476.5	497.2
60°	322.4	343.1	401.9	452.7	474.9
62.5°	287.5	309.7	374.9	428.9	452.7
65°	257.3	279.6	346.3	403.5	428.9
67.5°	217.6	247.8	322.4	376.5	401.9
70°	177.9	219.2	292.3	347.9	371.7
72.5°	147.7	187.4	262.1	317.7	339.9
75°	112.8	157.3	230.3	278.0	292.3
77.5°	84.2	130.2	197.0	220.8	222.4
80°	61.9	100.1	149.3	157.3	163.6
82.5°	42.9	69.9	96.9	106.4	109.6
85°	27.0	41.3	55.6	60.4	60.4
87.5°	14.3	15.9	19.1	19.1	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)