

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: P308280

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-HRP-CP250-W2A-U-4500K**

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: P308280
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-CP250-W2A-U-4500K
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: 2598.0 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

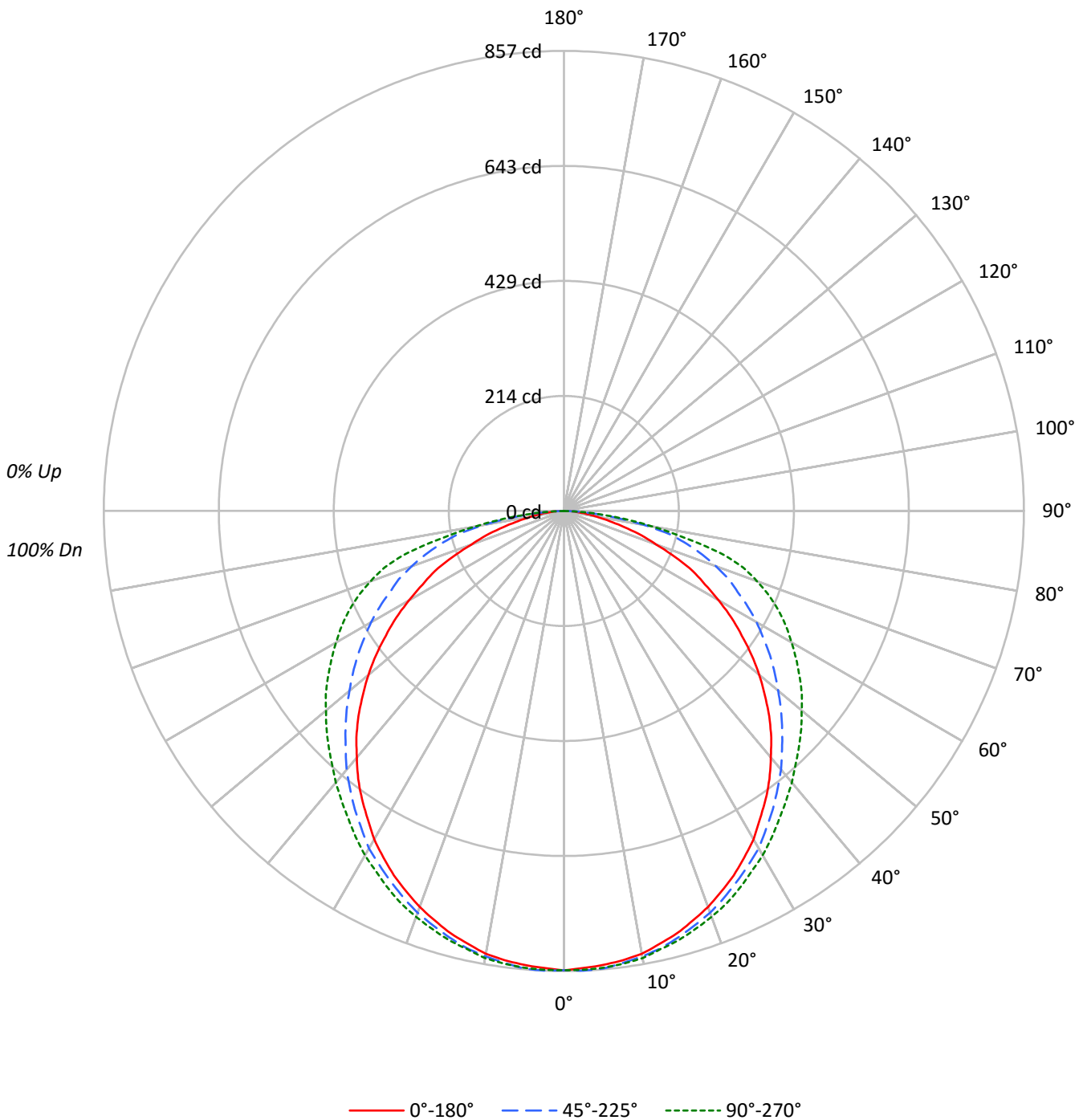
Input Watts (W): 33
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2302	2302	2302
5°	2293	2311	2307
10°	2288	2302	2311
15°	2269	2292	2306
20°	2248	2281	2304
25°	2224	2263	2302
30°	2195	2256	2302
35°	2153	2229	2299
40°	2107	2211	2320
45°	2058	2189	2358
50°	1990	2182	2422
55°	1899	2199	2514
60°	1791	2231	2637
65°	1691	2275	2818
70°	1445	2373	3017
75°	1210	2470	3136
80°	990	2388	2616
85°	861	1772	1924



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.1	3.1
10°-20°	231.9	8.9
20°-30°	351.5	13.5
30°-40°	424.4	16.3
40°-50°	446.0	17.2
50°-60°	419.6	16.2
60°-70°	349.9	13.5
70°-80°	231.8	8.9
80°-90°	61.8	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°	664.5	25.6
0°-40°	1088.9	41.9
0°-60°	1954.5	75.2
0°-90°	2598.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2598.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	856	856	856	856	856	
5°	849	851	856	856	854	81
15°	814	818	823	826	828	230
25°	749	754	762	772	775	345
35°	656	662	678	693	700	410
45°	541	549	575	605	620	417
55°	405	423	469	516	536	362
65°	266	288	357	416	442	258
75°	116	162	238	287	302	126
85°	28	43	57	62	62	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	855.5	855.5	855.5	855.5	855.5
2.5°	852.2	853.9	857.1	857.1	855.5
5°	848.9	850.6	855.5	855.5	853.9
7.5°	844.0	845.7	848.9	852.2	850.6
10°	837.5	839.1	842.4	845.7	845.7
12.5°	826.0	827.6	834.2	835.8	835.8
15°	814.5	817.8	822.7	826.0	827.6
17.5°	799.8	803.0	809.6	816.2	816.2
20°	785.0	788.3	796.5	803.0	804.7
22.5°	767.0	771.9	780.1	788.3	791.6
25°	749.0	753.9	762.1	771.9	775.2
27.5°	727.7	732.6	744.0	755.5	757.2
30°	706.4	711.3	726.0	735.9	740.8
32.5°	680.1	686.7	701.4	716.2	721.1
35°	655.5	662.1	678.5	693.2	699.8
37.5°	629.3	635.9	653.9	671.9	680.1
40°	599.8	608.0	629.3	649.0	660.5
42.5°	572.0	580.2	601.5	627.7	639.2
45°	540.8	549.0	575.2	604.7	619.5
47.5°	508.1	517.9	549.0	585.1	599.8
50°	475.3	486.7	521.2	562.1	578.5
52.5°	440.9	455.6	494.9	539.2	558.9
55°	404.8	422.8	468.7	516.2	535.9
57.5°	370.4	386.8	440.9	491.7	513.0
60°	332.7	354.0	414.6	467.1	490.0
62.5°	296.6	319.6	386.8	442.5	467.1
65°	265.5	288.4	357.3	416.3	442.5
67.5°	224.5	255.7	332.7	388.4	414.6
70°	183.6	226.2	301.6	358.9	383.5
72.5°	152.4	193.4	270.4	327.8	350.7
75°	116.4	162.2	237.6	286.8	301.6
77.5°	86.9	134.4	203.2	227.8	229.4
80°	63.9	103.2	154.1	162.2	168.8
82.5°	44.2	72.1	100.0	109.8	113.1
85°	27.9	42.6	57.4	62.3	62.3
87.5°	14.7	16.4	19.7	19.7	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)