

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: P309283

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CA08-W2A-U-6500K**

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: P309283
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-35-UNV-L82765-HRP-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 6500K 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: 2579.0 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

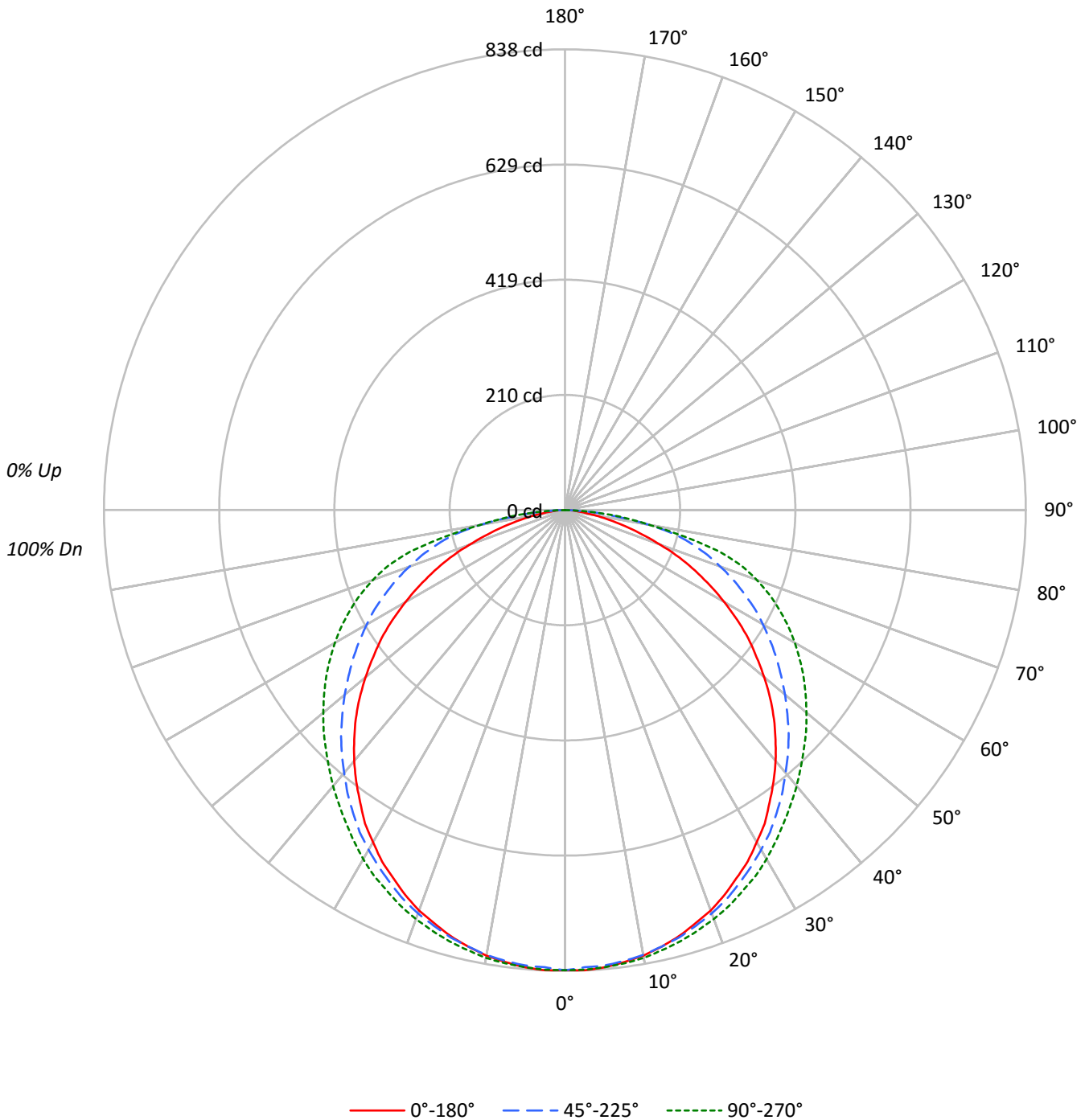
Input Watts (W): 29.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1126	1126	1126
5°	1127	1123	1127
10°	1124	1123	1130
15°	1117	1120	1131
20°	1110	1118	1133
25°	1096	1112	1135
30°	1084	1109	1139
35°	1066	1103	1140
40°	1047	1096	1151
45°	1023	1095	1169
50°	990	1094	1200
55°	955	1102	1244
60°	901	1119	1299
65°	832	1145	1372
70°	726	1185	1461
75°	590	1246	1510
80°	435	1221	1221
85°	333	900	1017



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.3	3.1
10°-20°	227.6	8.8
20°-30°	346.5	13.4
30°-40°	420.8	16.3
40°-50°	444.5	17.2
50°-60°	419.5	16.3
60°-70°	348.8	13.5
70°-80°	229.5	8.9
80°-90°	62.5	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°	653.4	25.3
0°-40°	1074.2	41.7
0°-60°	1938.2	75.2
0°-90°	2579.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2579.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	837	837	837	837	837	
5°	835	835	831	835	835	79
15°	802	803	804	812	812	226
25°	738	743	749	762	764	341
35°	649	656	672	689	694	406
45°	538	548	576	604	614	414
55°	407	424	470	514	530	363
65°	261	292	360	412	431	258
75°	113	165	240	284	290	122
85°	22	48	58	65	66	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	836.8	836.8	836.8	836.8	836.8
2.5°	837.8	836.8	832.4	836.8	836.8
5°	834.6	834.6	831.4	834.6	834.6
7.5°	829.2	829.2	827.0	831.4	831.4
10°	822.7	822.7	821.6	827.0	827.0
12.5°	813.0	814.1	813.0	819.5	819.5
15°	802.2	803.3	804.4	811.9	811.9
17.5°	788.2	790.3	792.5	801.1	802.2
20°	775.2	776.3	780.6	790.3	791.4
22.5°	757.9	761.2	766.6	776.3	779.5
25°	738.5	742.8	749.3	762.3	764.4
27.5°	720.2	723.4	732.0	746.1	750.4
30°	697.5	702.9	713.7	727.7	733.1
32.5°	675.9	681.3	694.2	709.4	713.7
35°	648.9	656.5	671.6	688.8	694.2
37.5°	623.0	630.5	648.9	668.3	674.8
40°	596.0	604.6	624.1	646.7	655.4
42.5°	566.8	578.7	600.3	625.1	634.9
45°	537.7	548.5	575.5	603.5	614.3
47.5°	506.4	519.3	548.5	582.0	594.9
50°	472.9	489.1	522.6	559.3	573.3
52.5°	439.4	457.8	495.6	536.6	551.7
55°	407.0	424.3	469.7	513.9	530.1
57.5°	371.4	393.0	442.7	490.2	506.4
60°	334.7	358.5	415.7	465.3	482.6
62.5°	298.0	325.0	389.8	439.4	457.8
65°	261.3	291.5	359.5	412.4	430.8
67.5°	225.7	259.1	331.5	384.4	402.7
70°	184.6	226.7	301.2	353.1	371.4
72.5°	146.8	195.4	272.1	320.7	336.9
75°	113.4	165.2	239.7	284.0	290.4
77.5°	83.1	135.0	206.2	221.3	222.4
80°	56.1	108.0	157.6	155.5	157.6
82.5°	36.7	81.0	99.3	111.2	112.3
85°	21.6	47.5	58.3	64.8	65.9
87.5°	10.8	16.2	20.5	21.6	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)