

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: P309330

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CA125-W2A-U-3000K**

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: P309330
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: 24FCZ2-40HE-UNV-L82765-HRP-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 2657.0 lumens
Efficiency: N/A
Efficacy: 88.0 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

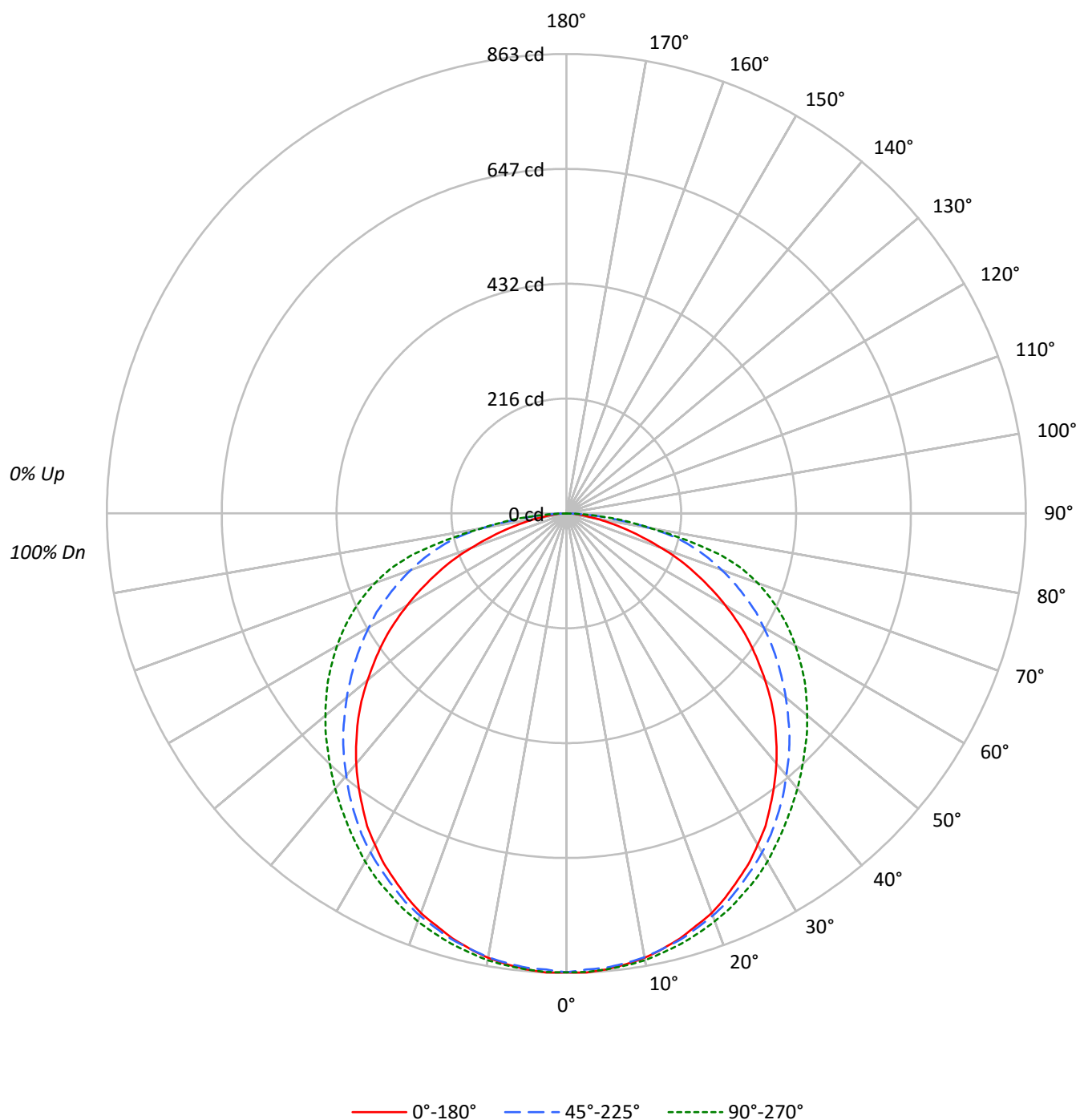
Input Watts (W): 30.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1160	1160	1160
5°	1161	1157	1161
10°	1158	1157	1164
15°	1151	1154	1165
20°	1144	1151	1167
25°	1129	1146	1169
30°	1116	1142	1173
35°	1098	1136	1175
40°	1078	1129	1186
45°	1054	1128	1204
50°	1020	1127	1236
55°	984	1135	1281
60°	928	1153	1338
65°	857	1179	1413
70°	748	1221	1505
75°	607	1284	1555
80°	448	1258	1258
85°	343	928	1048



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	3.1
10°-20°	234.5	8.8
20°-30°	357.0	13.4
30°-40°	433.5	16.3
40°-50°	458.0	17.2
50°-60°	432.2	16.3
60°-70°	359.3	13.5
70°-80°	236.4	8.9
80°-90°	64.4	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°	673.2	25.3
0°-40°	1106.7	41.7
0°-60°	1996.8	75.2
0°-90°	2657.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2657.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	860	860	856	860	860	82
15°	826	828	829	836	836	233
25°	761	765	772	785	788	351
35°	668	676	692	710	715	418
45°	554	565	593	622	633	427
55°	419	437	484	530	546	374
65°	269	300	370	425	444	266
75°	117	170	247	292	299	126
85°	22	49	60	67	68	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	862.1	862.1	862.1	862.1	862.1
2.5°	863.2	862.1	857.6	862.1	862.1
5°	859.8	859.8	856.5	859.8	859.8
7.5°	854.3	854.3	852.1	856.5	856.5
10°	847.6	847.6	846.5	852.1	852.1
12.5°	837.6	838.7	837.6	844.3	844.3
15°	826.5	827.6	828.7	836.5	836.5
17.5°	812.0	814.2	816.5	825.4	826.5
20°	798.7	799.8	804.2	814.2	815.3
22.5°	780.9	784.2	789.8	799.8	803.1
25°	760.8	765.3	772.0	785.3	787.5
27.5°	741.9	745.3	754.2	768.6	773.1
30°	718.6	724.1	735.3	749.7	755.3
32.5°	696.3	701.9	715.2	730.8	735.3
35°	668.5	676.3	691.9	709.7	715.2
37.5°	641.8	649.6	668.5	688.5	695.2
40°	614.0	622.9	642.9	666.3	675.2
42.5°	584.0	596.2	618.5	644.0	654.1
45°	553.9	565.1	592.9	621.8	632.9
47.5°	521.7	535.0	565.1	599.6	612.9
50°	487.2	503.9	538.4	576.2	590.7
52.5°	452.7	471.6	510.6	552.8	568.4
55°	419.4	437.2	483.9	529.5	546.2
57.5°	382.6	404.9	456.1	505.0	521.7
60°	344.8	369.3	428.3	479.4	497.2
62.5°	307.0	334.8	401.6	452.7	471.6
65°	269.2	300.3	370.4	424.9	443.8
67.5°	232.5	267.0	341.5	396.0	414.9
70°	190.2	233.6	310.3	363.7	382.6
72.5°	151.3	201.3	280.3	330.4	347.1
75°	116.8	170.2	246.9	292.5	299.2
77.5°	85.7	139.0	212.5	228.0	229.1
80°	57.8	111.2	162.4	160.2	162.4
82.5°	37.8	83.4	102.3	114.6	115.7
85°	22.2	48.9	60.1	66.7	67.9
87.5°	11.1	16.7	21.1	22.2	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)