

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: P309371

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CA08-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: P309371
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: 24FCZ2-40-UNV-L82765-HRP-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5500K 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: 2919.0 lumens
Efficiency: N/A
Efficacy: 86.9 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

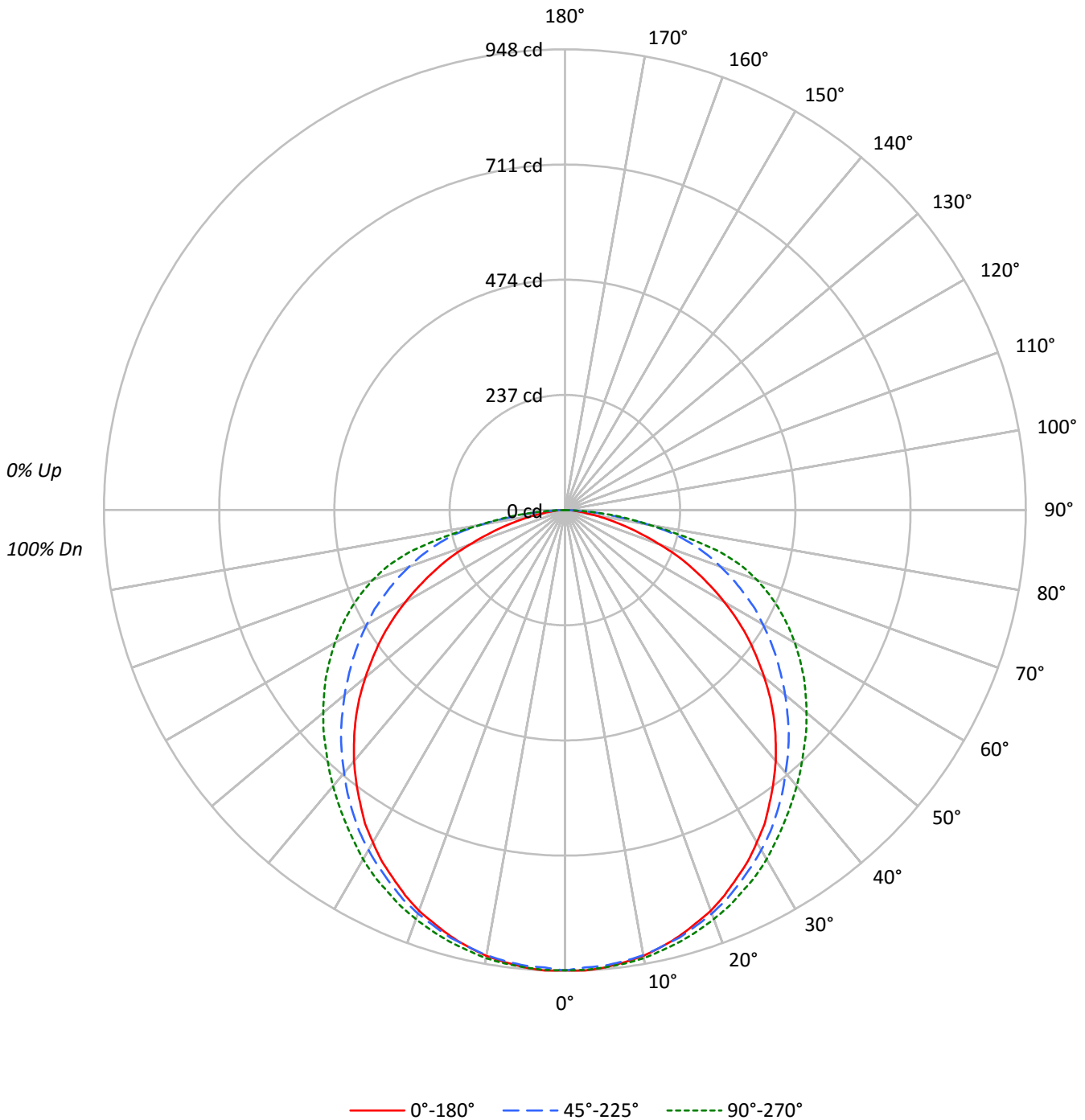
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1274	1274	1274
5°	1276	1271	1276
10°	1272	1271	1279
15°	1265	1268	1280
20°	1256	1265	1282
25°	1241	1259	1284
30°	1226	1255	1289
35°	1206	1248	1291
40°	1185	1241	1303
45°	1158	1239	1323
50°	1120	1238	1358
55°	1081	1247	1407
60°	1019	1266	1470
65°	941	1295	1552
70°	822	1341	1654
75°	667	1410	1709
80°	492	1382	1382
85°	377	1019	1150



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	3.1
10°-20°	257.6	8.8
20°-30°	392.2	13.4
30°-40°	476.2	16.3
40°-50°	503.1	17.2
50°-60°	474.8	16.3
60°-70°	394.8	13.5
70°-80°	259.7	8.9
80°-90°	70.8	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°	739.6	25.3
0°-40°	1215.8	41.7
0°-60°	2193.7	75.2
0°-90°	2919.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2919.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	947	947	947	947	947	
5°	945	945	941	945	945	90
15°	908	909	910	919	919	256
25°	836	841	848	863	865	386
35°	734	743	760	780	786	460
45°	609	621	651	683	695	469
55°	461	480	532	582	600	410
65°	296	330	407	467	488	292
75°	128	187	271	321	329	138
85°	24	54	66	73	74	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	947.1	947.1	947.1	947.1	947.1
2.5°	948.3	947.1	942.2	947.1	947.1
5°	944.6	944.6	941.0	944.6	944.6
7.5°	938.5	938.5	936.1	941.0	941.0
10°	931.2	931.2	930.0	936.1	936.1
12.5°	920.2	921.4	920.2	927.5	927.5
15°	908.0	909.2	910.4	919.0	919.0
17.5°	892.1	894.5	897.0	906.7	908.0
20°	877.4	878.6	883.5	894.5	895.7
22.5°	857.9	861.5	867.6	878.6	882.3
25°	835.9	840.8	848.1	862.8	865.2
27.5°	815.1	818.8	828.5	844.4	849.3
30°	789.4	795.5	807.8	823.6	829.8
32.5°	765.0	771.1	785.8	802.9	807.8
35°	734.4	743.0	760.1	779.7	785.8
37.5°	705.1	713.7	734.4	756.4	763.8
40°	674.6	684.3	706.3	732.0	741.8
42.5°	641.6	655.0	679.4	707.6	718.6
45°	608.6	620.8	651.3	683.1	695.3
47.5°	573.1	587.8	620.8	658.7	673.3
50°	535.2	553.6	591.5	633.0	648.9
52.5°	497.4	518.1	560.9	607.3	624.5
55°	460.7	480.3	531.6	581.7	600.0
57.5°	420.4	444.8	501.0	554.8	573.1
60°	378.8	405.7	470.5	526.7	546.2
62.5°	337.3	367.8	441.2	497.4	518.1
65°	295.7	329.9	406.9	466.8	487.6
67.5°	255.4	293.3	375.2	435.0	455.8
70°	209.0	256.6	340.9	399.6	420.4
72.5°	166.2	221.2	308.0	362.9	381.3
75°	128.3	187.0	271.3	321.4	328.7
77.5°	94.1	152.8	233.4	250.5	251.7
80°	63.5	122.2	178.4	176.0	178.4
82.5°	41.5	91.7	112.4	125.9	127.1
85°	24.4	53.8	66.0	73.3	74.5
87.5°	12.2	18.3	23.2	24.4	26.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)