

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: P309407

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CP250-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: P309407
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-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB 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: 2709.0 lumens
Efficiency: N/A
Efficacy: 80.6 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

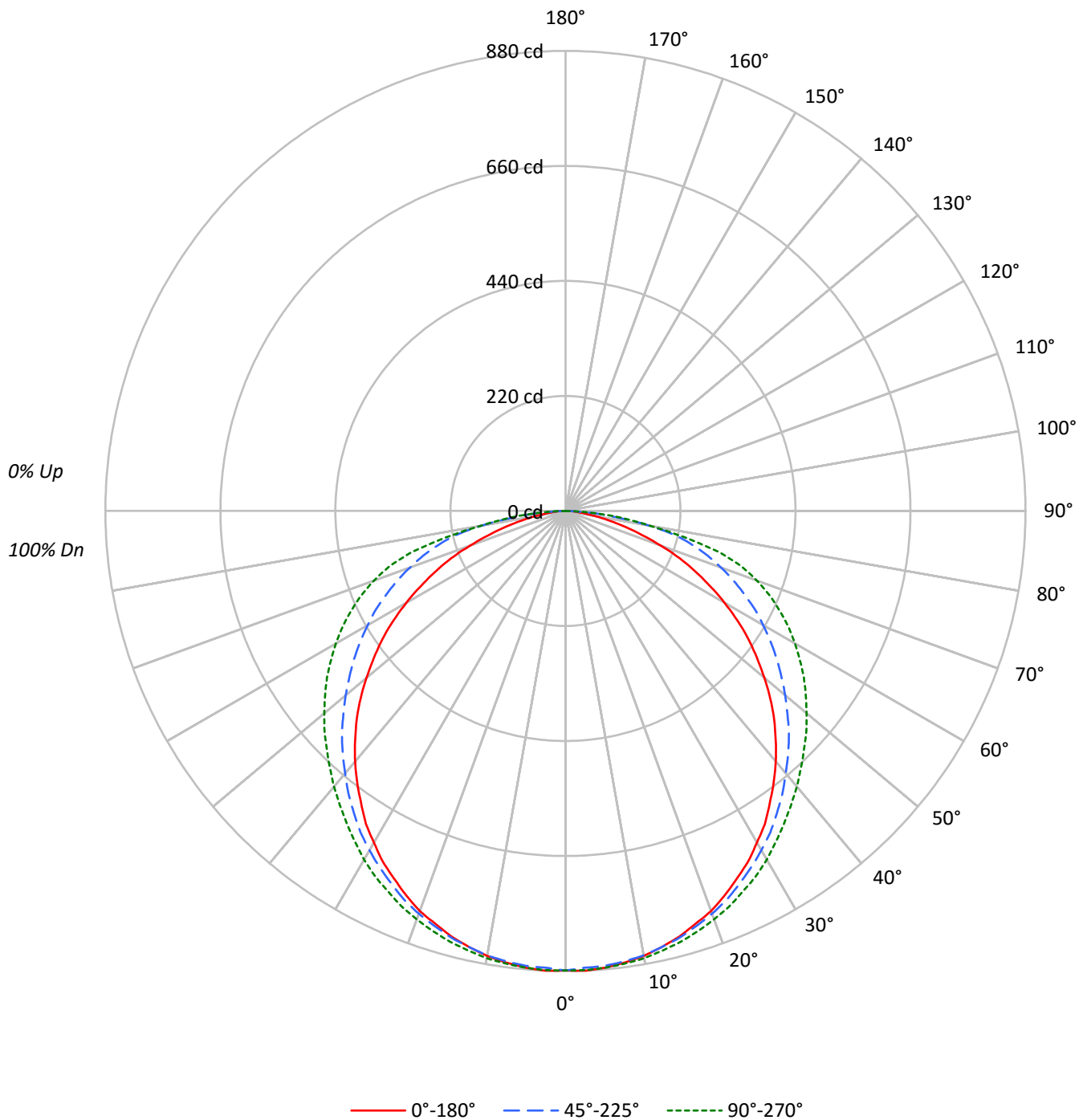
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1183	1183	1183
5°	1184	1180	1184
10°	1181	1179	1187
15°	1174	1177	1188
20°	1166	1174	1190
25°	1152	1169	1192
30°	1138	1165	1196
35°	1120	1159	1198
40°	1100	1151	1209
45°	1075	1150	1228
50°	1040	1149	1261
55°	1003	1157	1306
60°	946	1175	1364
65°	874	1202	1441
70°	763	1245	1535
75°	619	1309	1586
80°	457	1283	1283
85°	350	945	1068



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.3	3.1
10°-20°	239.1	8.8
20°-30°	364.0	13.4
30°-40°	442.0	16.3
40°-50°	467.0	17.2
50°-60°	440.6	16.3
60°-70°	366.4	13.5
70°-80°	241.0	8.9
80°-90°	65.7	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°	686.4	25.3
0°-40°	1128.3	41.7
0°-60°	2035.9	75.2
0°-90°	2709.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2709.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	879	879	879	879	879	
5°	877	877	873	877	877	83
15°	843	844	845	853	853	238
25°	776	780	787	801	803	358
35°	682	690	705	724	729	427
45°	565	576	604	634	645	435
55°	428	446	493	540	557	381
65°	274	306	378	433	452	271
75°	119	174	252	298	305	128
85°	23	50	61	68	69	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	878.9	878.9	878.9	878.9	878.9
2.5°	880.1	878.9	874.4	878.9	878.9
5°	876.7	876.7	873.3	876.7	876.7
7.5°	871.0	871.0	868.7	873.3	873.3
10°	864.2	864.2	863.1	868.7	868.7
12.5°	854.0	855.1	854.0	860.8	860.8
15°	842.6	843.8	844.9	852.9	852.9
17.5°	827.9	830.2	832.4	841.5	842.6
20°	814.3	815.4	820.0	830.2	831.3
22.5°	796.1	799.5	805.2	815.4	818.8
25°	775.7	780.3	787.1	800.7	803.0
27.5°	756.5	759.9	768.9	783.7	788.2
30°	732.6	738.3	749.6	764.4	770.1
32.5°	710.0	715.6	729.2	745.1	749.6
35°	681.6	689.5	705.4	723.6	729.2
37.5°	654.4	662.3	681.6	702.0	708.8
40°	626.0	635.1	655.5	679.3	688.4
42.5°	595.4	607.9	630.6	656.7	666.9
45°	564.8	576.1	604.5	634.0	645.3
47.5°	531.9	545.5	576.1	611.3	624.9
50°	496.7	513.8	548.9	587.5	602.2
52.5°	461.6	480.9	520.6	563.7	579.5
55°	427.6	445.7	493.3	539.8	556.8
57.5°	390.1	412.8	465.0	514.9	531.9
60°	351.6	376.5	436.6	488.8	506.9
62.5°	313.0	341.4	409.4	461.6	480.9
65°	274.5	306.2	377.7	433.2	452.5
67.5°	237.0	272.2	348.2	403.7	423.0
70°	193.9	238.2	316.4	370.9	390.1
72.5°	154.2	205.3	285.8	336.8	353.8
75°	119.1	173.5	251.8	298.3	305.1
77.5°	87.3	141.8	216.6	232.5	233.6
80°	59.0	113.4	165.6	163.3	165.6
82.5°	38.6	85.1	104.3	116.8	117.9
85°	22.7	49.9	61.2	68.0	69.2
87.5°	11.3	17.0	21.5	22.7	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)