

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: P309406

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CP250-W2A-U-5000K**

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: P309406
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-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 5000K 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: 2683.0 lumens
Efficiency: N/A
Efficacy: 80.1 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

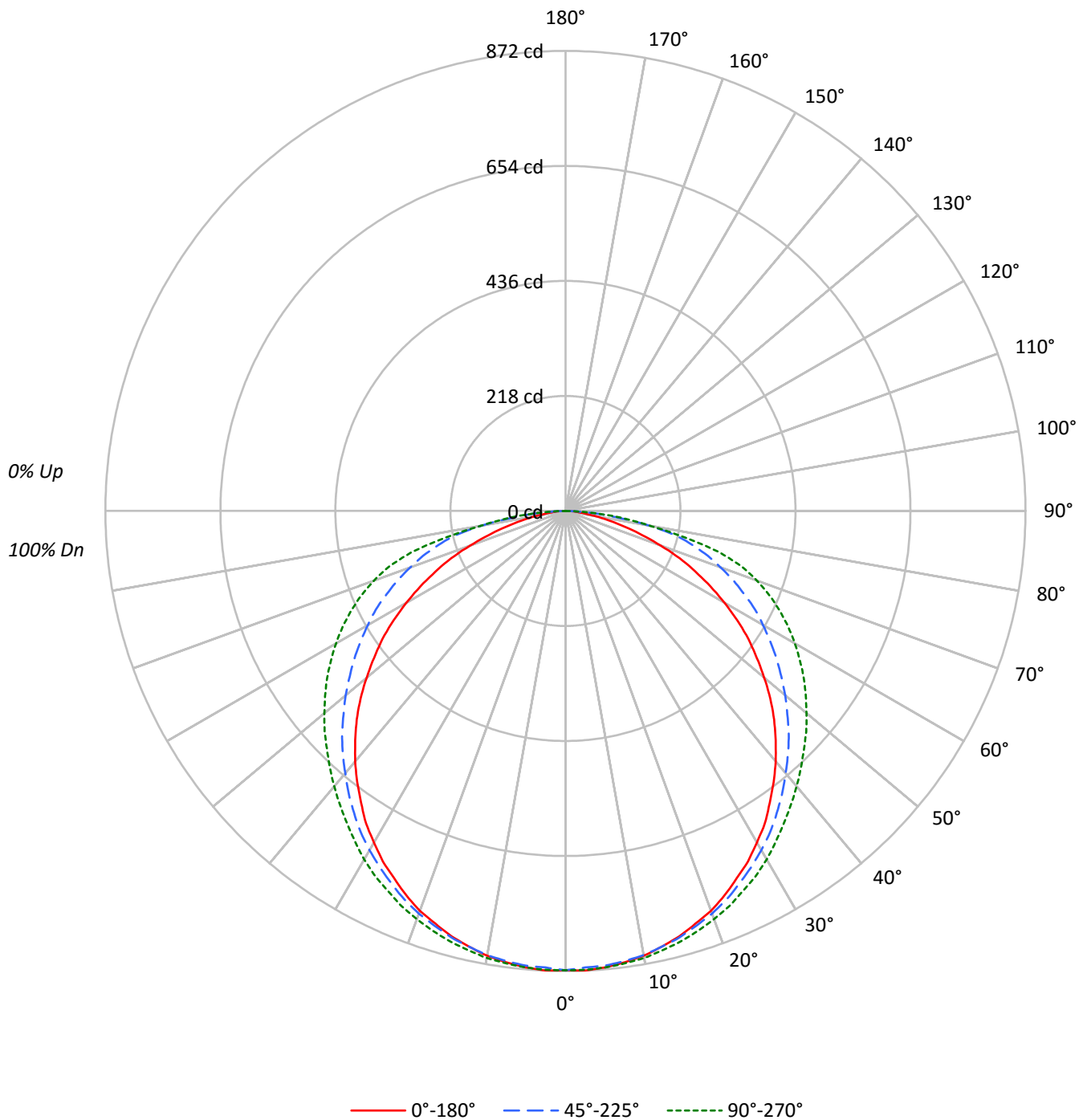
Input Watts (W): 33.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1171	1171	1171
5°	1173	1168	1173
10°	1169	1168	1176
15°	1163	1166	1177
20°	1155	1163	1179
25°	1141	1157	1181
30°	1127	1154	1185
35°	1109	1147	1186
40°	1089	1140	1198
45°	1064	1139	1216
50°	1030	1138	1248
55°	993	1146	1294
60°	937	1164	1351
65°	865	1191	1427
70°	756	1233	1520
75°	613	1297	1570
80°	453	1271	1271
85°	347	937	1057



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.5	3.1
10°-20°	236.8	8.8
20°-30°	360.5	13.4
30°-40°	437.7	16.3
40°-50°	462.5	17.2
50°-60°	436.4	16.3
60°-70°	362.9	13.5
70°-80°	238.7	8.9
80°-90°	65.1	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°	679.8	25.3
0°-40°	1117.5	41.7
0°-60°	2016.4	75.2
0°-90°	2683.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2683.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	870	870	870	870	870	
5°	868	868	865	868	868	82
15°	835	836	837	845	845	235
25°	768	773	780	793	795	354
35°	675	683	699	717	722	423
45°	559	571	599	628	639	431
55°	424	441	489	535	552	377
65°	272	303	374	429	448	269
75°	118	172	249	295	302	127
85°	22	49	61	67	68	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	870.5	870.5	870.5	870.5	870.5
2.5°	871.6	870.5	866.0	870.5	870.5
5°	868.3	868.3	864.9	868.3	868.3
7.5°	862.6	862.6	860.4	864.9	864.9
10°	855.9	855.9	854.8	860.4	860.4
12.5°	845.8	846.9	845.8	852.5	852.5
15°	834.6	835.7	836.8	844.7	844.7
17.5°	820.0	822.2	824.4	833.4	834.6
20°	806.5	807.6	812.1	822.2	823.3
22.5°	788.5	791.9	797.5	807.6	811.0
25°	768.3	772.8	779.5	793.0	795.2
27.5°	749.2	752.6	761.5	776.2	780.6
30°	725.6	731.2	742.5	757.1	762.7
32.5°	703.1	708.8	722.2	738.0	742.5
35°	675.1	682.9	698.6	716.6	722.2
37.5°	648.1	656.0	675.1	695.3	702.0
40°	620.0	629.0	649.2	672.8	681.8
42.5°	589.7	602.1	624.5	650.3	660.5
45°	559.4	570.6	598.7	627.9	639.1
47.5°	526.8	540.3	570.6	605.4	618.9
50°	492.0	508.8	543.6	581.8	596.4
52.5°	457.2	476.2	515.6	558.2	574.0
55°	423.5	441.4	488.6	534.7	551.5
57.5°	386.4	408.9	460.5	509.9	526.8
60°	348.2	372.9	432.4	484.1	502.1
62.5°	310.0	338.1	405.5	457.2	476.2
65°	271.8	303.3	374.0	429.1	448.2
67.5°	234.8	269.6	344.8	399.9	419.0
70°	192.1	235.9	313.4	367.3	386.4
72.5°	152.8	203.3	283.1	333.6	350.4
75°	117.9	171.9	249.4	295.4	302.1
77.5°	86.5	140.4	214.5	230.3	231.4
80°	58.4	112.3	164.0	161.7	164.0
82.5°	38.2	84.2	103.3	115.7	116.8
85°	22.5	49.4	60.7	67.4	68.5
87.5°	11.2	16.8	21.3	22.5	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)