

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: P309386

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CP125-W2A-U-4000K**

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: P309386
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 4000K 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: 2738.0 lumens
Efficiency: N/A
Efficacy: 82.7 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

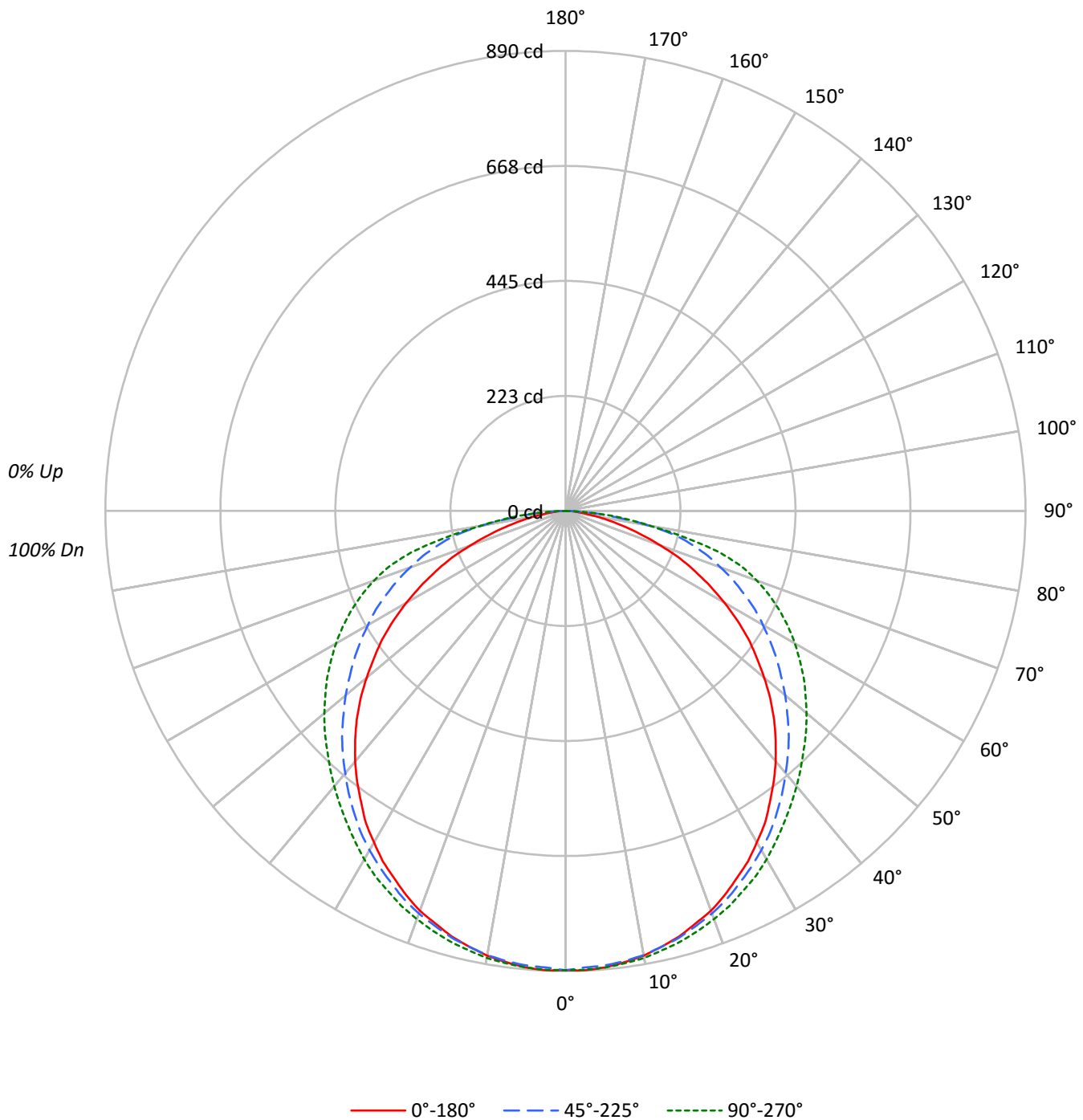
Input Watts (W): 33.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1195	1195	1195
5°	1197	1192	1197
10°	1193	1192	1200
15°	1186	1190	1201
20°	1178	1187	1203
25°	1164	1181	1205
30°	1150	1177	1209
35°	1132	1171	1211
40°	1111	1164	1222
45°	1086	1163	1241
50°	1051	1161	1274
55°	1014	1170	1320
60°	956	1188	1379
65°	883	1215	1456
70°	771	1258	1551
75°	626	1323	1603
80°	462	1297	1297
85°	354	956	1079



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.2	3.1
10°-20°	241.7	8.8
20°-30°	367.9	13.4
30°-40°	446.7	16.3
40°-50°	472.0	17.2
50°-60°	445.3	16.3
60°-70°	370.3	13.5
70°-80°	243.6	8.9
80°-90°	66.4	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°	693.7	25.3
0°-40°	1140.4	41.7
0°-60°	2057.7	75.2
0°-90°	2738.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2738.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	888	888	888	888	888	
5°	886	886	883	886	886	84
15°	852	853	854	862	862	240
25°	784	789	796	809	812	362
35°	689	697	713	731	737	431
45°	571	582	611	641	652	440
55°	432	450	499	546	563	385
65°	277	310	382	438	457	274
75°	120	175	254	302	308	130
85°	23	50	62	69	70	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	888.3	888.3	888.3	888.3	888.3
2.5°	889.5	888.3	883.8	888.3	888.3
5°	886.1	886.1	882.6	886.1	886.1
7.5°	880.3	880.3	878.0	882.6	882.6
10°	873.4	873.4	872.3	878.0	878.0
12.5°	863.1	864.3	863.1	870.0	870.0
15°	851.7	852.8	854.0	862.0	862.0
17.5°	836.8	839.1	841.3	850.5	851.7
20°	823.0	824.2	828.7	839.1	840.2
22.5°	804.7	808.1	813.8	824.2	827.6
25°	784.0	788.6	795.5	809.3	811.5
27.5°	764.6	768.0	777.2	792.1	796.6
30°	740.5	746.2	757.7	772.6	778.3
32.5°	717.6	723.3	737.0	753.1	757.7
35°	688.9	696.9	713.0	731.3	737.0
37.5°	661.4	669.4	688.9	709.5	716.4
40°	632.7	641.9	662.5	686.6	695.8
42.5°	601.8	614.4	637.3	663.7	674.0
45°	570.8	582.3	611.0	640.8	652.2
47.5°	537.6	551.3	582.3	617.8	631.6
50°	502.1	519.3	554.8	593.8	608.7
52.5°	466.5	486.0	526.1	569.7	585.7
55°	432.1	450.5	498.6	545.6	562.8
57.5°	394.3	417.2	470.0	520.4	537.6
60°	355.3	380.6	441.3	494.0	512.4
62.5°	316.4	345.0	413.8	466.5	486.0
65°	277.4	309.5	381.7	437.9	457.4
67.5°	239.6	275.1	351.9	408.1	427.6
70°	196.0	240.7	319.8	374.8	394.3
72.5°	155.9	207.5	288.9	340.4	357.6
75°	120.4	175.4	254.5	301.5	308.3
77.5°	88.3	143.3	218.9	235.0	236.1
80°	59.6	114.6	167.4	165.1	167.4
82.5°	39.0	86.0	105.5	118.1	119.2
85°	22.9	50.4	61.9	68.8	69.9
87.5°	11.5	17.2	21.8	22.9	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)