

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: P311186

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-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: P311186
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L82765-S-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 2876.0 lumens
Efficiency: N/A
Efficacy: 135.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

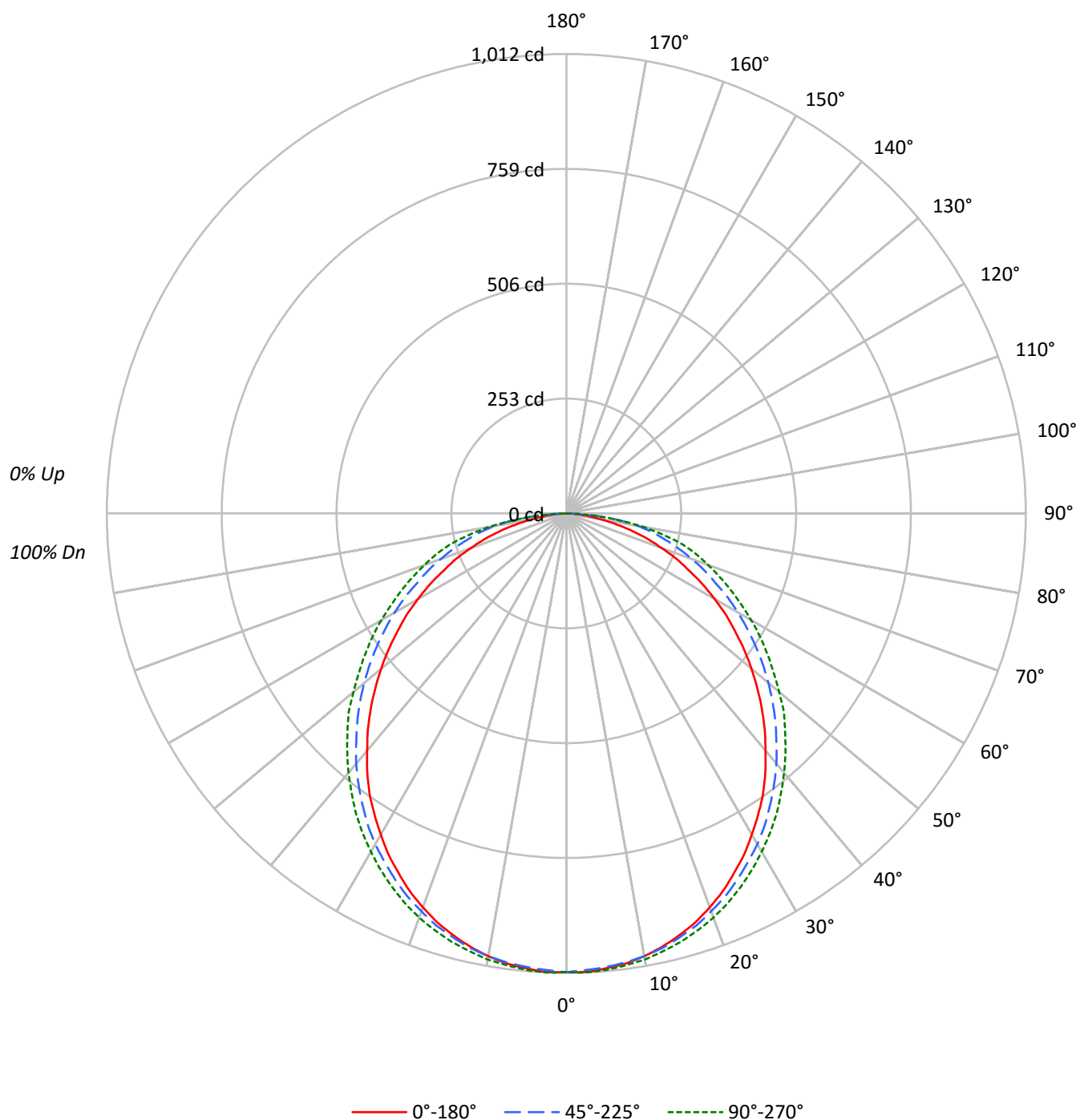
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1359	1359	1359
5°	1358	1355	1363
10°	1353	1353	1363
15°	1340	1346	1360
20°	1322	1335	1356
25°	1298	1322	1348
30°	1269	1307	1337
35°	1241	1286	1327
40°	1199	1264	1311
45°	1159	1239	1297
50°	1115	1216	1281
55°	1065	1194	1269
60°	1015	1175	1266
65°	951	1155	1274
70°	880	1161	1308
75°	788	1183	1382
80°	637	1253	1352
85°	480	1101	1071



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.7	3.3
10°-20°	273.3	9.5
20°-30°	410.8	14.3
30°-40°	489.4	17.0
40°-50°	500.9	17.4
50°-60°	450.9	15.7
60°-70°	354.1	12.3
70°-80°	229.8	8.0
80°-90°	71.1	2.5
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°	779.8	27.1
0°-40°	1269.2	44.1
0°-60°	2221.0	77.2
0°-90°	2876.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2876.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1010	1010	1010	1010	1010	
5°	1006	1008	1003	1008	1009	96
15°	962	965	966	975	977	271
25°	874	882	891	905	908	403
35°	756	765	783	802	808	471
45°	609	624	651	676	682	470
55°	454	474	509	535	541	407
65°	299	322	363	393	400	297
75°	152	181	228	258	266	160
85°	31	58	71	69	69	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1010.4	1010.4	1010.4	1010.4	1010.4
2.5°	1011.3	1011.3	1006.7	1011.3	1012.2
5°	1005.8	1007.6	1003.0	1008.5	1009.4
7.5°	1000.3	1000.3	997.6	1003.0	1004.0
10°	990.3	991.2	990.3	996.7	997.6
12.5°	977.5	979.3	980.2	986.6	987.5
15°	961.9	964.7	966.5	974.7	976.6
17.5°	944.6	947.3	951.9	961.0	962.9
20°	923.6	927.2	932.7	944.6	947.3
22.5°	900.7	904.4	913.5	924.5	929.1
25°	874.2	881.6	890.7	905.3	908.0
27.5°	847.8	854.1	866.0	881.6	885.2
30°	816.7	826.7	841.4	856.9	860.5
32.5°	786.5	796.6	813.9	830.4	835.0
35°	755.5	764.6	782.9	802.1	807.6
37.5°	719.9	731.7	751.8	771.0	776.5
40°	682.4	697.0	719.9	740.0	746.3
42.5°	646.8	662.3	685.1	707.1	714.4
45°	609.3	623.9	651.3	676.0	681.5
47.5°	571.0	587.4	616.6	641.3	650.4
50°	532.6	549.9	581.0	606.6	612.1
52.5°	494.2	512.5	545.4	572.8	575.5
55°	454.0	474.1	508.8	535.3	540.8
57.5°	417.5	434.8	472.3	499.7	506.1
60°	377.3	396.5	436.7	462.2	470.5
62.5°	338.9	359.0	401.0	426.6	433.9
65°	298.7	321.6	362.7	392.8	400.1
67.5°	264.0	285.9	329.8	359.0	366.3
70°	223.8	248.5	295.1	325.2	332.5
72.5°	189.1	214.7	261.3	290.5	301.5
75°	151.6	180.9	227.5	258.5	265.8
77.5°	115.1	148.9	196.4	220.2	220.2
80°	82.2	117.8	161.7	172.7	174.5
82.5°	53.9	88.6	119.7	118.8	118.8
85°	31.1	57.6	71.3	69.4	69.4
87.5°	11.9	23.8	25.6	25.6	24.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)