

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: P313128

Luminaire Tested: **24FCZ2-35-UNV-L83050-HRP-CP125-W2A-U-4500K**

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: P313128
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: 24FCZ2-35-UNV-L83050-HRP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (168) 4500K 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: 2616.0 lumens
Efficiency: N/A
Efficacy: 89.0 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

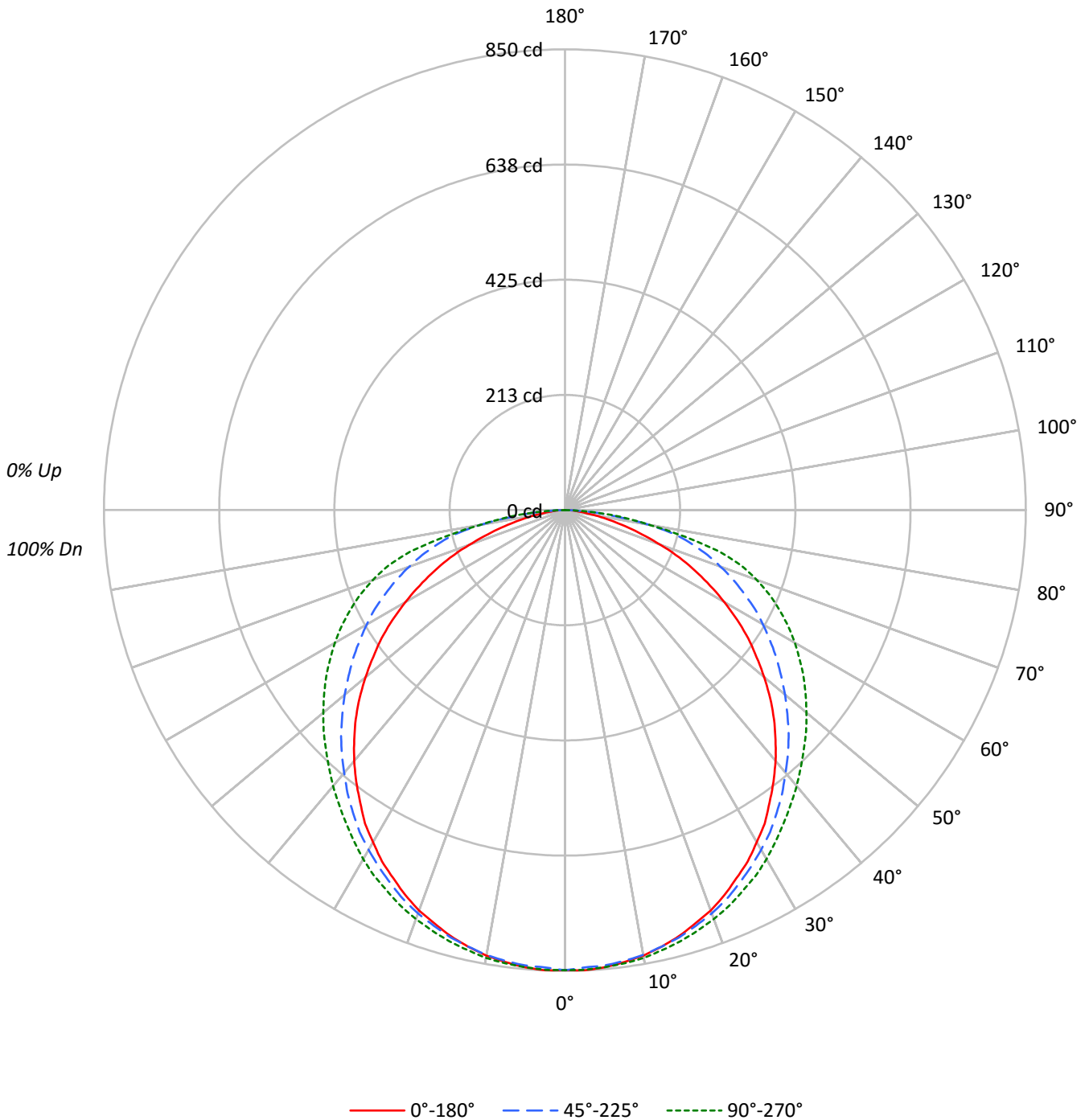
Input Watts (W): 29.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1142	1142	1142
5°	1143	1139	1143
10°	1140	1139	1146
15°	1133	1137	1147
20°	1126	1134	1149
25°	1112	1128	1151
30°	1099	1125	1155
35°	1081	1119	1157
40°	1062	1112	1168
45°	1038	1111	1186
50°	1004	1110	1217
55°	969	1118	1261
60°	914	1135	1317
65°	844	1161	1391
70°	737	1202	1482
75°	598	1264	1531
80°	441	1239	1239
85°	338	912	1031



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.4	3.1
10°-20°	230.9	8.8
20°-30°	351.5	13.4
30°-40°	426.8	16.3
40°-50°	450.9	17.2
50°-60°	425.5	16.3
60°-70°	353.8	13.5
70°-80°	232.8	8.9
80°-90°	63.4	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°	662.8	25.3
0°-40°	1089.6	41.7
0°-60°	1966.0	75.2
0°-90°	2616.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2616.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	849	849	849	849	849	
5°	847	847	843	847	847	80
15°	814	815	816	824	824	229
25°	749	754	760	773	775	346
35°	658	666	681	699	704	412
45°	545	556	584	612	623	420
55°	413	430	476	521	538	368
65°	265	296	365	418	437	262
75°	115	168	243	288	295	124
85°	22	48	59	66	67	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	848.8	848.8	848.8	848.8	848.8
2.5°	849.9	848.8	844.4	848.8	848.8
5°	846.6	846.6	843.3	846.6	846.6
7.5°	841.1	841.1	838.9	843.3	843.3
10°	834.5	834.5	833.4	838.9	838.9
12.5°	824.7	825.8	824.7	831.2	831.2
15°	813.7	814.8	815.9	823.6	823.6
17.5°	799.5	801.7	803.9	812.6	813.7
20°	786.3	787.4	791.8	801.7	802.8
22.5°	768.8	772.1	777.6	787.4	790.7
25°	749.1	753.5	760.1	773.2	775.4
27.5°	730.5	733.8	742.5	756.8	761.1
30°	707.5	713.0	723.9	738.2	743.6
32.5°	685.6	691.1	704.2	719.5	723.9
35°	658.2	665.9	681.2	698.7	704.2
37.5°	631.9	639.6	658.2	677.9	684.5
40°	604.5	613.3	633.0	656.0	664.8
42.5°	575.0	587.0	608.9	634.1	644.0
45°	545.4	556.4	583.7	612.2	623.2
47.5°	513.6	526.8	556.4	590.3	603.4
50°	479.7	496.1	530.1	567.3	581.5
52.5°	445.7	464.4	502.7	544.3	559.6
55°	412.9	430.4	476.4	521.3	537.7
57.5°	376.7	398.6	449.0	497.2	513.6
60°	339.5	363.6	421.6	472.0	489.5
62.5°	302.3	329.6	395.4	445.7	464.4
65°	265.0	295.7	364.7	418.4	437.0
67.5°	228.9	262.8	336.2	389.9	408.5
70°	187.3	230.0	305.6	358.1	376.7
72.5°	148.9	198.2	276.0	325.3	341.7
75°	115.0	167.6	243.1	288.0	294.6
77.5°	84.3	136.9	209.2	224.5	225.6
80°	56.9	109.5	159.9	157.7	159.9
82.5°	37.2	82.1	100.8	112.8	113.9
85°	21.9	48.2	59.1	65.7	66.8
87.5°	11.0	16.4	20.8	21.9	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)