

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: P313097

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-HRP-CA125-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: P313097
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: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 2615.0 lumens
Efficiency: N/A
Efficacy: 98.3 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

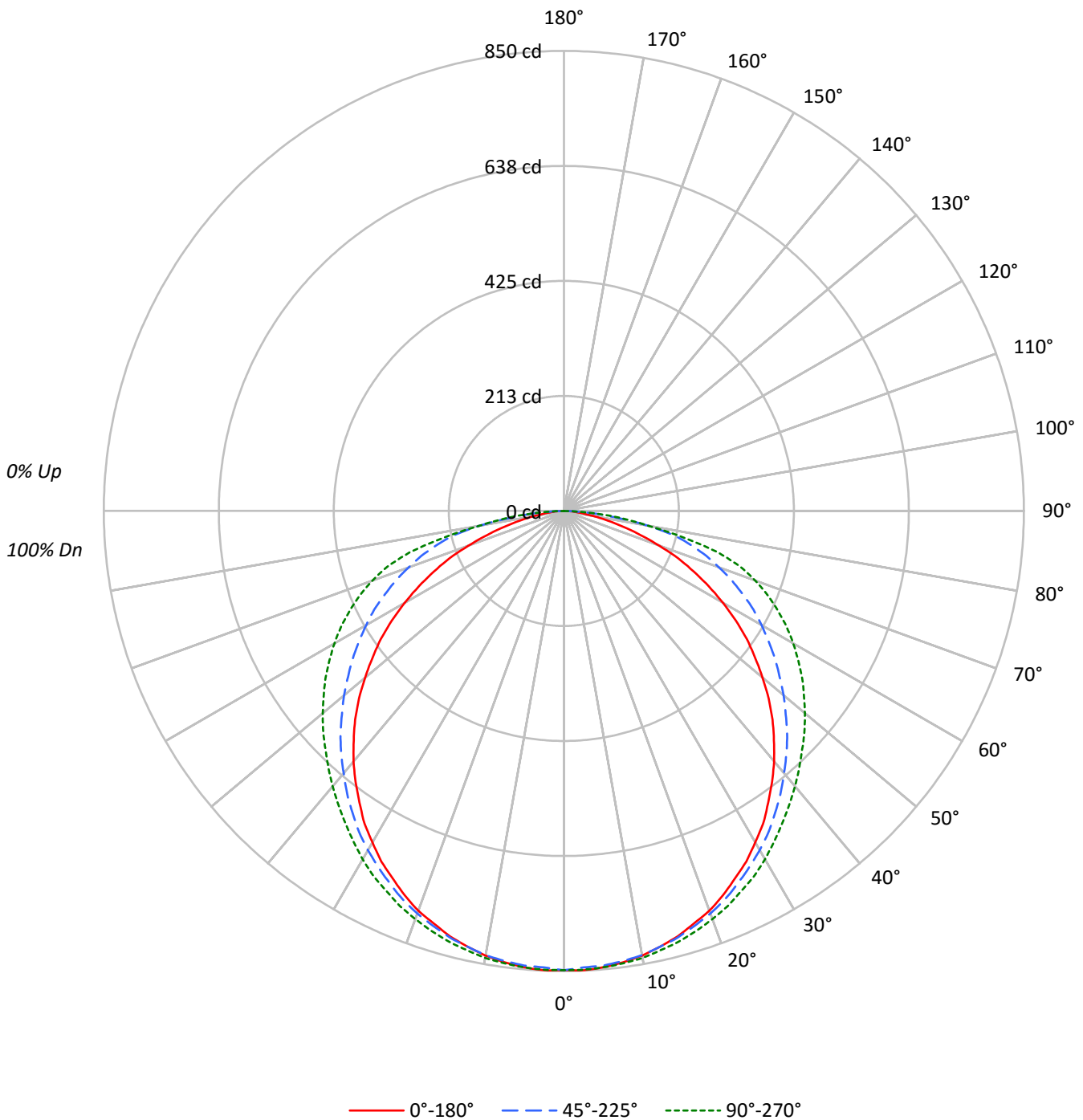
Input Watts (W): 26.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P313097

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P313097

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-4000K

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	1138	1146
15°	1133	1136	1147
20°	1125	1133	1149
25°	1112	1128	1151
30°	1099	1124	1155
35°	1081	1118	1156
40°	1061	1111	1167
45°	1037	1110	1185
50°	1004	1109	1217
55°	968	1117	1261
60°	913	1134	1317
65°	843	1161	1391
70°	736	1201	1482
75°	597	1263	1531
80°	441	1238	1238
85°	338	912	1031



TEST NUMBER: P313097

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.4	3.1
10°-20°	230.8	8.8
20°-30°	351.4	13.4
30°-40°	426.6	16.3
40°-50°	450.8	17.2
50°-60°	425.3	16.3
60°-70°	353.6	13.5
70°-80°	232.7	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°	662.5	25.3
0°-40°	1089.2	41.7
0°-60°	1965.3	75.2
0°-90°	2615.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2615.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	848	848	848	848	848	
5°	846	846	843	846	846	80
15°	813	814	816	823	823	229
25°	749	753	760	773	775	345
35°	658	666	681	698	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	294	124
85°	22	48	59	66	67	27
90°	0	0	0	0	0	



TEST NUMBER: P313097

CATALOG NUMBER: 24FCZ2-35HE-UNV-L83050-HRP-CA125-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	848.4	848.4	848.4	848.4	848.4
2.5°	849.5	848.4	844.1	848.4	848.4
5°	846.2	846.2	843.0	846.2	846.2
7.5°	840.8	840.8	838.6	843.0	843.0
10°	834.2	834.2	833.1	838.6	838.6
12.5°	824.4	825.4	824.4	830.9	830.9
15°	813.4	814.5	815.6	823.3	823.3
17.5°	799.2	801.4	803.6	812.3	813.4
20°	786.0	787.1	791.5	801.4	802.5
22.5°	768.5	771.8	777.3	787.1	790.4
25°	748.8	753.2	759.8	772.9	775.1
27.5°	730.2	733.5	742.2	756.5	760.9
30°	707.2	712.7	723.6	737.9	743.3
32.5°	685.3	690.8	703.9	719.3	723.6
35°	658.0	665.6	680.9	698.5	703.9
37.5°	631.7	639.3	658.0	677.7	684.2
40°	604.3	613.1	632.8	655.8	664.5
42.5°	574.7	586.8	608.7	633.9	643.7
45°	545.2	556.1	583.5	612.0	622.9
47.5°	513.4	526.6	556.1	590.1	603.2
50°	479.5	495.9	529.9	567.1	581.3
52.5°	445.6	464.2	502.5	544.1	559.4
55°	412.7	430.2	476.2	521.1	537.5
57.5°	376.6	398.5	448.9	497.0	513.4
60°	339.4	363.5	421.5	471.8	489.4
62.5°	302.2	329.5	395.2	445.6	464.2
65°	264.9	295.6	364.6	418.2	436.8
67.5°	228.8	262.7	336.1	389.7	408.3
70°	187.2	229.9	305.4	358.0	376.6
72.5°	148.9	198.2	275.9	325.1	341.6
75°	114.9	167.5	243.0	287.9	294.5
77.5°	84.3	136.8	209.1	224.4	225.5
80°	56.9	109.5	159.8	157.6	159.8
82.5°	37.2	82.1	100.7	112.8	113.9
85°	21.9	48.2	59.1	65.7	66.8
87.5°	10.9	16.4	20.8	21.9	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)