

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: P309238

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CA08-W2A-U-6500K**

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: P309238
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-L82765-HRP-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 6500K 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: 2551.0 lumens
Efficiency: N/A
Efficacy: 93.8 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

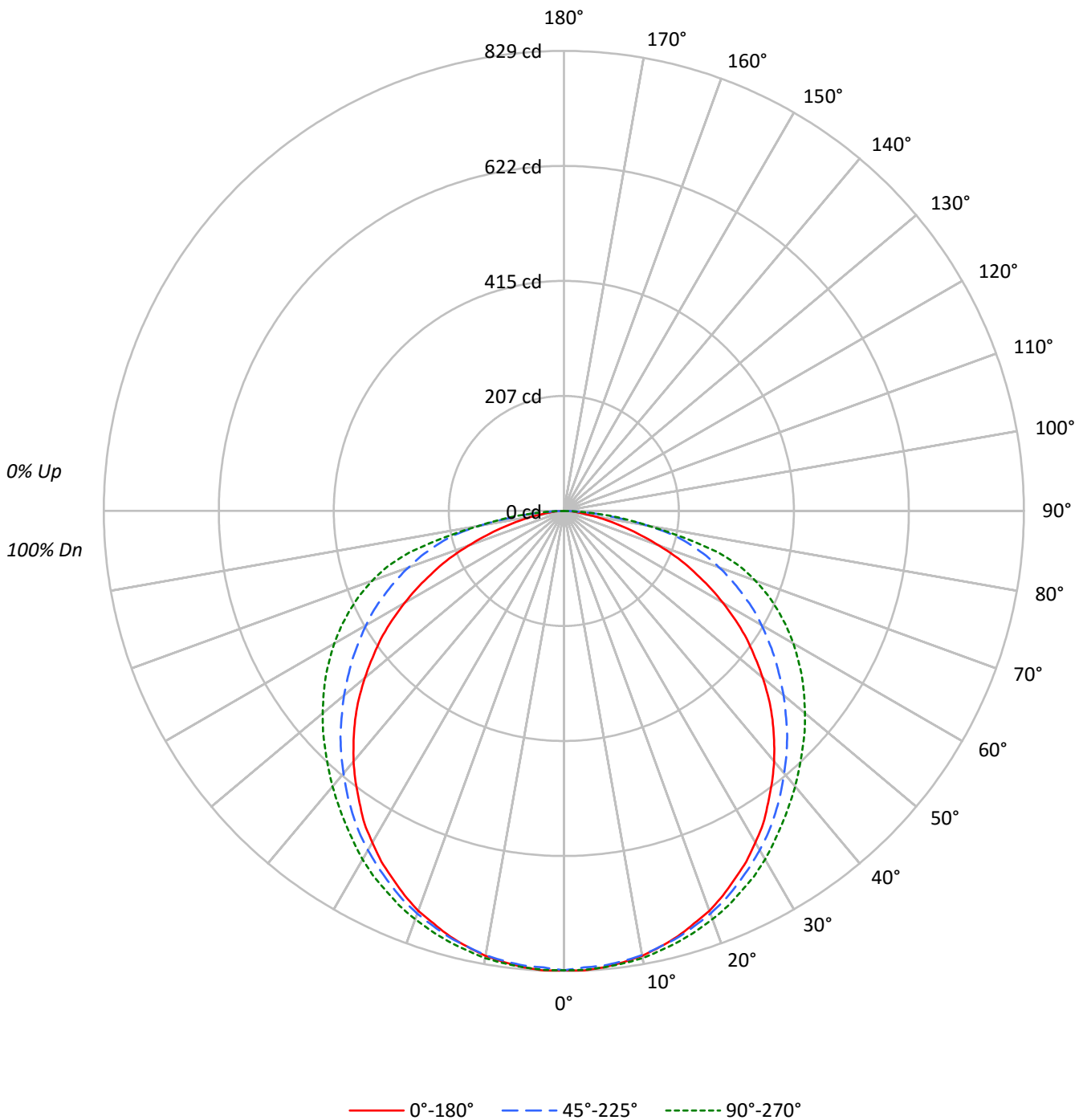
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309238

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-HRP-CA08-W2A-U-6500K

Luminous Intensity Polar Plot





TEST NUMBER: P309238

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-HRP-CA08-W2A-U-6500K

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°	1114	1114	1114
5°	1115	1111	1115
10°	1112	1110	1118
15°	1105	1108	1119
20°	1098	1106	1121
25°	1084	1100	1122
30°	1072	1097	1127
35°	1054	1091	1128
40°	1035	1084	1139
45°	1012	1083	1156
50°	979	1082	1187
55°	944	1090	1230
60°	891	1107	1285
65°	823	1132	1357
70°	718	1172	1445
75°	583	1233	1494
80°	430	1208	1208
85°	330	891	1005



TEST NUMBER: P309238

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-HRP-CA08-W2A-U-6500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.4	3.1
10°-20°	225.2	8.8
20°-30°	342.8	13.4
30°-40°	416.2	16.3
40°-50°	439.7	17.2
50°-60°	414.9	16.3
60°-70°	345.0	13.5
70°-80°	227.0	8.9
80°-90°	61.9	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°	646.3	25.3
0°-40°	1062.5	41.7
0°-60°	1917.2	75.2
0°-90°	2551.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2551.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	828	828	828	828	828	
5°	826	826	822	826	826	78
15°	794	795	796	803	803	224
25°	730	735	741	754	756	337
35°	642	649	664	681	687	402
45°	532	542	569	597	608	410
55°	403	420	465	508	524	359
65°	258	288	356	408	426	255
75°	112	163	237	281	287	121
85°	21	47	58	64	65	26
90°	0	0	0	0	0	



TEST NUMBER: P309238

CATALOG NUMBER: 24FCZ2-35HE-UNV-L82765-HRP-CA08-W2A-U-6500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	827.7	827.7	827.7	827.7	827.7
2.5°	828.7	827.7	823.4	827.7	827.7
5°	825.5	825.5	822.3	825.5	825.5
7.5°	820.2	820.2	818.1	822.3	822.3
10°	813.8	813.8	812.7	818.1	818.1
12.5°	804.2	805.2	804.2	810.6	810.6
15°	793.5	794.6	795.6	803.1	803.1
17.5°	779.6	781.8	783.9	792.4	793.5
20°	766.8	767.9	772.1	781.8	782.8
22.5°	749.7	752.9	758.3	767.9	771.1
25°	730.5	734.8	741.2	754.0	756.1
27.5°	712.3	715.5	724.1	738.0	742.2
30°	689.9	695.2	705.9	719.8	725.1
32.5°	668.5	673.9	686.7	701.7	705.9
35°	641.8	649.3	664.3	681.4	686.7
37.5°	616.2	623.7	641.8	661.1	667.5
40°	589.5	598.1	617.3	639.7	648.3
42.5°	560.7	572.4	593.8	618.4	628.0
45°	531.8	542.5	569.2	597.0	607.7
47.5°	500.9	513.7	542.5	575.6	588.4
50°	467.8	483.8	516.9	553.2	567.1
52.5°	434.7	452.8	490.2	530.8	545.7
55°	402.6	419.7	464.6	508.4	524.4
57.5°	367.4	388.7	437.9	484.9	500.9
60°	331.1	354.6	411.2	460.3	477.4
62.5°	294.8	321.5	385.5	434.7	452.8
65°	258.4	288.4	355.6	408.0	426.1
67.5°	223.2	256.3	327.9	380.2	398.4
70°	182.6	224.3	298.0	349.2	367.4
72.5°	145.2	193.3	269.1	317.2	333.2
75°	112.1	163.4	237.1	280.9	287.3
77.5°	82.2	133.5	204.0	218.9	220.0
80°	55.5	106.8	155.9	153.8	155.9
82.5°	36.3	80.1	98.3	110.0	111.1
85°	21.4	47.0	57.7	64.1	65.1
87.5°	10.7	16.0	20.3	21.4	23.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)