

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: P308097

Luminaire Tested: **22FCZ2-20HE-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P308097
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L82765-HRP-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 3000K 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: 1324.0 lumens
Efficiency: N/A
Efficacy: 79.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

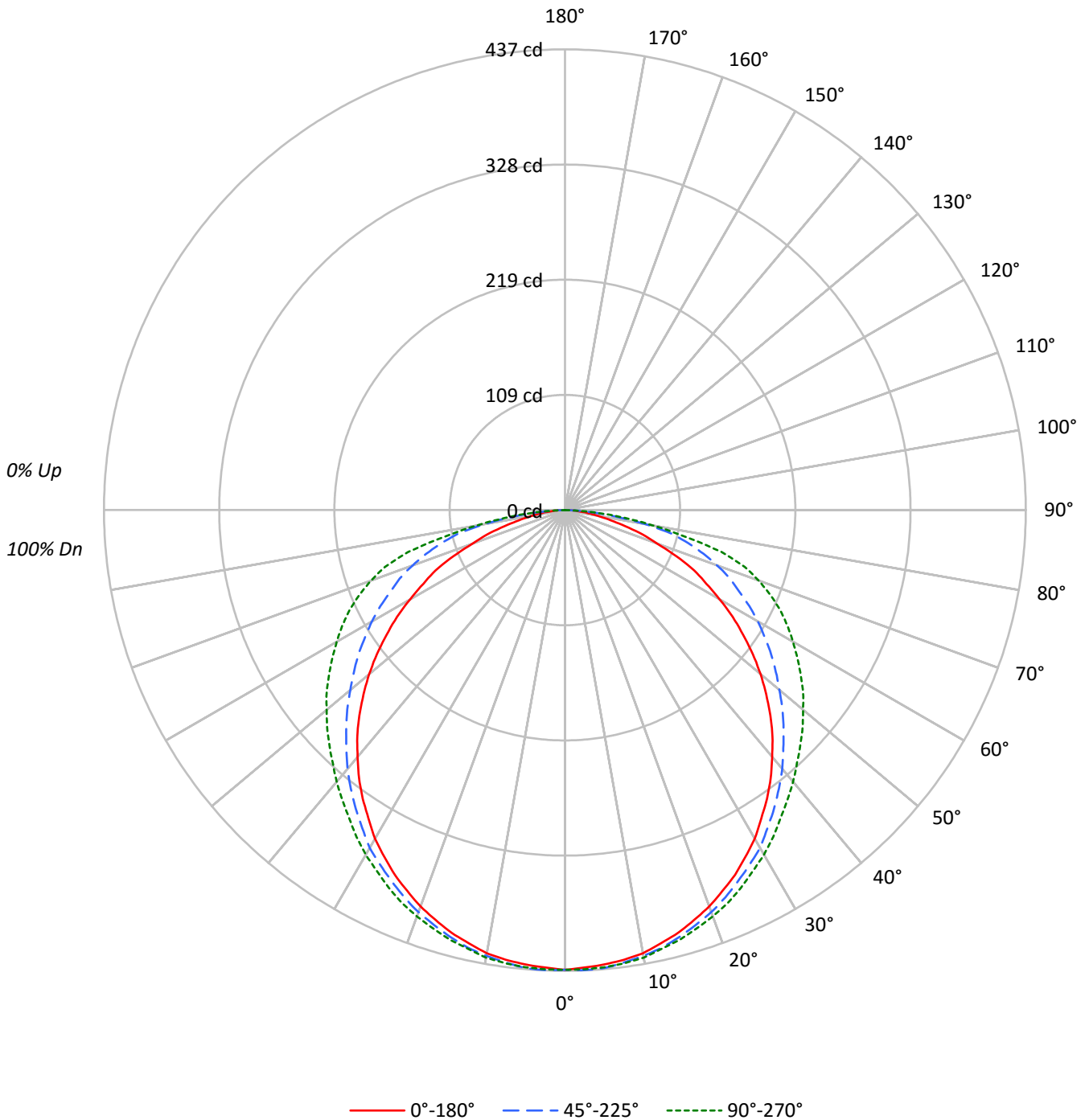
Input Watts (W): 16.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1173	1173	1173
5°	1169	1178	1175
10°	1166	1173	1178
15°	1156	1168	1175
20°	1146	1162	1174
25°	1133	1153	1173
30°	1119	1150	1173
35°	1098	1136	1171
40°	1074	1127	1182
45°	1049	1116	1201
50°	1014	1112	1234
55°	968	1121	1281
60°	912	1137	1344
65°	862	1160	1436
70°	736	1209	1537
75°	617	1259	1598
80°	505	1216	1333
85°	438	902	979



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.3	3.1
10°-20°	118.2	8.9
20°-30°	179.1	13.5
30°-40°	216.3	16.3
40°-50°	227.3	17.2
50°-60°	213.9	16.2
60°-70°	178.3	13.5
70°-80°	118.1	8.9
80°-90°	31.5	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°	338.6	25.6
0°-40°	554.9	41.9
0°-60°	996.1	75.2
0°-90°	1324.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1324.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	436	436	436	436	436	
5°	433	434	436	436	435	41
15°	415	417	419	421	422	117
25°	382	384	388	393	395	176
35°	334	337	346	353	357	209
45°	276	280	293	308	316	212
55°	206	216	239	263	273	185
65°	135	147	182	212	226	132
75°	59	83	121	146	154	64
85°	14	22	29	32	32	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	436.0	436.0	436.0	436.0	436.0
2.5°	434.3	435.1	436.8	436.8	436.0
5°	432.6	433.5	436.0	436.0	435.1
7.5°	430.1	431.0	432.6	434.3	433.5
10°	426.8	427.6	429.3	431.0	431.0
12.5°	420.9	421.8	425.1	426.0	426.0
15°	415.1	416.8	419.3	420.9	421.8
17.5°	407.6	409.3	412.6	415.9	415.9
20°	400.1	401.7	405.9	409.3	410.1
22.5°	390.9	393.4	397.6	401.7	403.4
25°	381.7	384.2	388.4	393.4	395.1
27.5°	370.8	373.3	379.2	385.0	385.9
30°	360.0	362.5	370.0	375.0	377.5
32.5°	346.6	350.0	357.5	365.0	367.5
35°	334.1	337.4	345.8	353.3	356.6
37.5°	320.7	324.1	333.2	342.4	346.6
40°	305.7	309.9	320.7	330.7	336.6
42.5°	291.5	295.7	306.5	319.9	325.7
45°	275.6	279.8	293.2	308.2	315.7
47.5°	258.9	263.9	279.8	298.2	305.7
50°	242.2	248.1	265.6	286.5	294.8
52.5°	224.7	232.2	252.2	274.8	284.8
55°	206.3	215.5	238.9	263.1	273.1
57.5°	188.8	197.1	224.7	250.6	261.4
60°	169.5	180.4	211.3	238.0	249.7
62.5°	151.2	162.9	197.1	225.5	238.0
65°	135.3	147.0	182.1	212.1	225.5
67.5°	114.4	130.3	169.5	197.9	211.3
70°	93.5	115.3	153.7	182.9	195.4
72.5°	77.7	98.6	137.8	167.0	178.7
75°	59.3	82.7	121.1	146.2	153.7
77.5°	44.3	68.5	103.6	116.1	116.9
80°	32.6	52.6	78.5	82.7	86.0
82.5°	22.6	36.7	50.9	56.0	57.6
85°	14.2	21.7	29.2	31.7	31.7
87.5°	7.5	8.4	10.0	10.0	10.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)