

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: P309623

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CP187-W2A-U-5500K**

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: P309623
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: 24FCZ2-55HE-UNV-L82765-HRP-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 5500K 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: 3745.0 lumens
Efficiency: N/A
Efficacy: 84.5 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

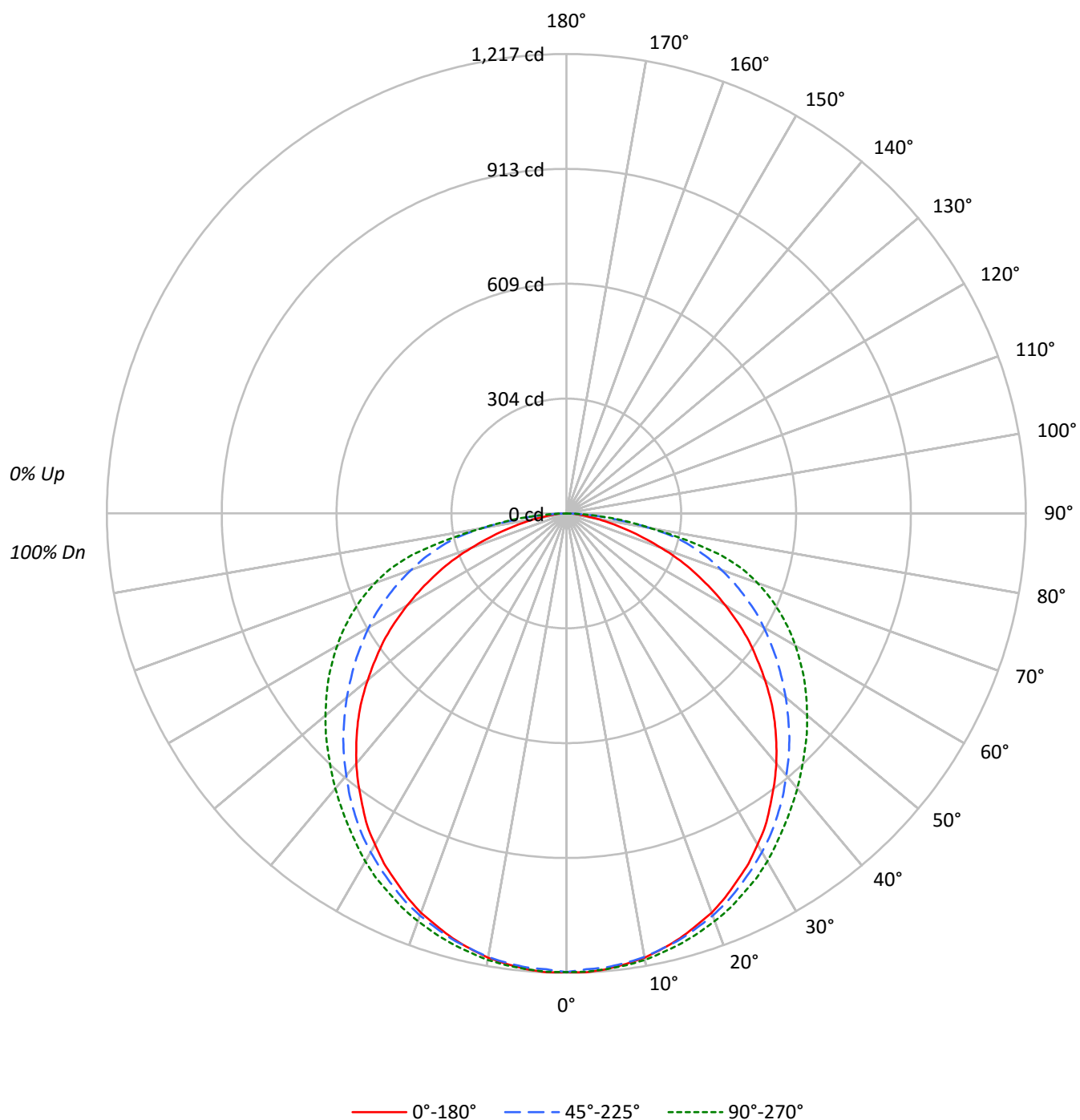
Input Watts (W): 44.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1635	1635	1635
5°	1637	1630	1637
10°	1632	1630	1641
15°	1623	1627	1642
20°	1612	1623	1645
25°	1592	1615	1648
30°	1574	1610	1654
35°	1548	1602	1656
40°	1520	1592	1672
45°	1486	1590	1697
50°	1437	1588	1743
55°	1387	1600	1806
60°	1308	1624	1886
65°	1208	1662	1992
70°	1055	1721	2122
75°	856	1810	2192
80°	631	1774	1774
85°	485	1308	1476



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.1	3.1
10°-20°	330.5	8.8
20°-30°	503.2	13.4
30°-40°	611.0	16.3
40°-50°	645.5	17.2
50°-60°	609.1	16.3
60°-70°	506.5	13.5
70°-80°	333.2	8.9
80°-90°	90.8	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°	948.9	25.3
0°-40°	1559.9	41.7
0°-60°	2814.5	75.2
0°-90°	3745.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3745.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1215	1215	1215	1215	1215	
5°	1212	1212	1207	1212	1212	115
15°	1165	1166	1168	1179	1179	329
25°	1072	1079	1088	1107	1110	495
35°	942	953	975	1000	1008	590
45°	781	796	836	876	892	601
55°	591	616	682	746	770	526
65°	379	423	522	599	626	375
75°	165	240	348	412	422	177
85°	31	69	85	94	96	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1215.1	1215.1	1215.1	1215.1	1215.1
2.5°	1216.6	1215.1	1208.8	1215.1	1215.1
5°	1211.9	1211.9	1207.2	1211.9	1211.9
7.5°	1204.1	1204.1	1201.0	1207.2	1207.2
10°	1194.7	1194.7	1193.1	1201.0	1201.0
12.5°	1180.6	1182.1	1180.6	1190.0	1190.0
15°	1164.9	1166.5	1168.0	1179.0	1179.0
17.5°	1144.5	1147.7	1150.8	1163.3	1164.9
20°	1125.7	1127.3	1133.5	1147.7	1149.2
22.5°	1100.6	1105.3	1113.2	1127.3	1132.0
25°	1072.4	1078.7	1088.1	1106.9	1110.0
27.5°	1045.7	1050.4	1063.0	1083.4	1089.6
30°	1012.8	1020.7	1036.3	1056.7	1064.6
32.5°	981.5	989.3	1008.1	1030.1	1036.3
35°	942.3	953.2	975.2	1000.3	1008.1
37.5°	904.6	915.6	942.3	970.5	979.9
40°	865.4	878.0	906.2	939.1	951.7
42.5°	823.1	840.4	871.7	907.8	921.9
45°	780.8	796.5	835.7	876.4	892.1
47.5°	735.3	754.1	796.5	845.1	863.9
50°	686.7	710.2	758.8	812.1	832.5
52.5°	638.1	664.8	719.6	779.2	801.2
55°	591.1	616.2	682.0	746.3	769.8
57.5°	539.3	570.7	642.8	711.8	735.3
60°	486.0	520.5	603.6	675.7	700.8
62.5°	432.7	471.9	566.0	638.1	664.8
65°	379.4	423.3	522.1	598.9	625.6
67.5°	327.7	376.3	481.3	558.1	584.8
70°	268.1	329.2	437.4	512.7	539.3
72.5°	213.2	283.8	395.1	465.6	489.2
75°	164.6	239.9	348.1	412.3	421.7
77.5°	120.7	196.0	299.5	321.4	323.0
80°	81.5	156.8	228.9	225.8	228.9
82.5°	53.3	117.6	144.2	161.5	163.1
85°	31.4	69.0	84.7	94.1	95.6
87.5°	15.7	23.5	29.8	31.4	34.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)