

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: P309800

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CP187-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: P309800
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: 24FCZ2-75HE-UNV-L82765-HRP-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB 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: 4883.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

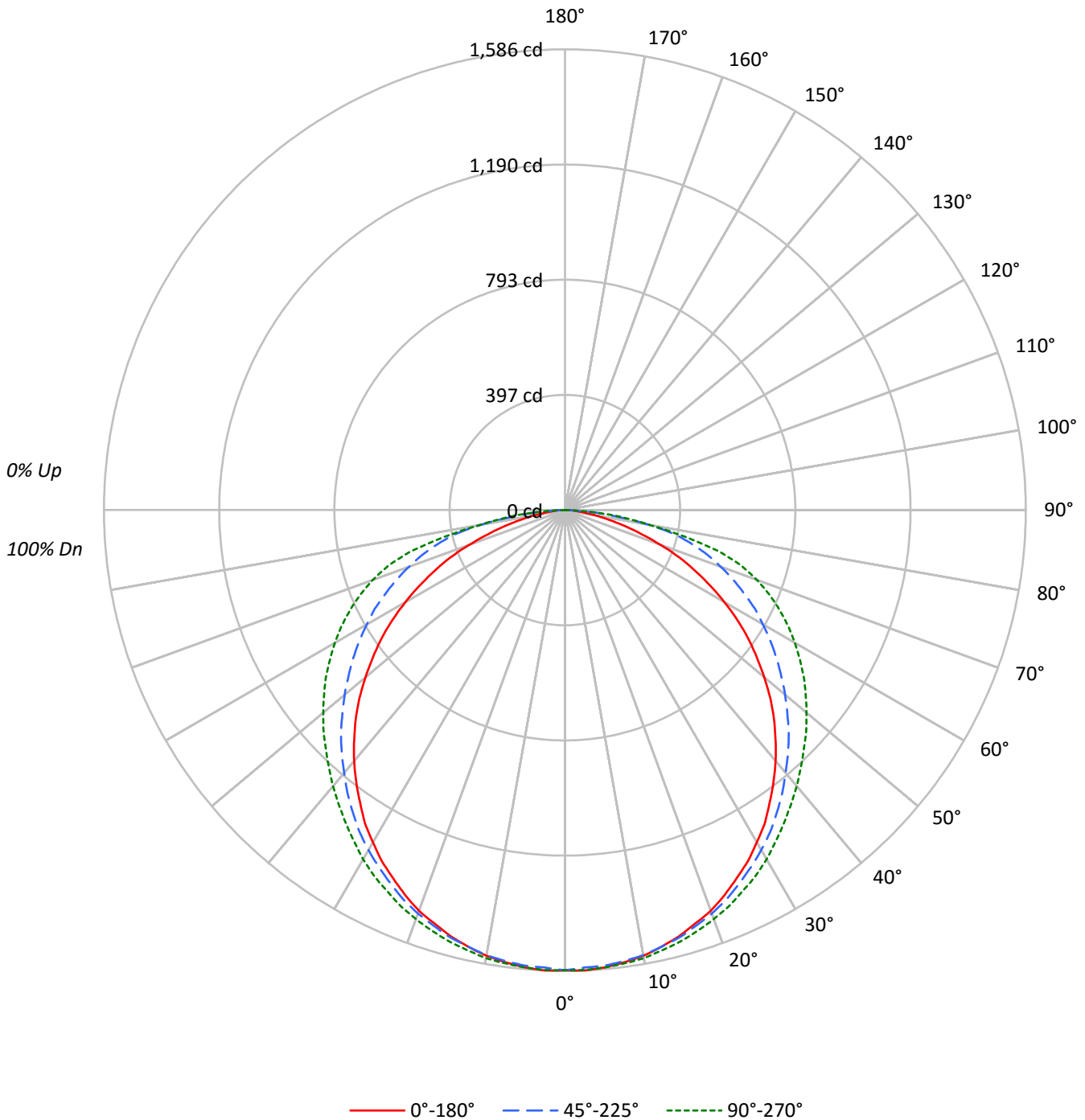
Input Watts (W): 63.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2132	2132	2132
5°	2134	2126	2134
10°	2128	2125	2139
15°	2116	2121	2141
20°	2102	2116	2145
25°	2076	2106	2149
30°	2052	2099	2156
35°	2018	2088	2159
40°	1982	2075	2180
45°	1937	2073	2213
50°	1874	2071	2272
55°	1808	2086	2354
60°	1705	2118	2459
65°	1575	2167	2597
70°	1375	2244	2766
75°	1116	2359	2859
80°	824	2313	2313
85°	631	1704	1925



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	3.1
10°-20°	431.0	8.8
20°-30°	656.1	13.4
30°-40°	796.7	16.3
40°-50°	841.7	17.2
50°-60°	794.2	16.3
60°-70°	660.4	13.5
70°-80°	434.5	8.9
80°-90°	118.4	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°	1237.2	25.3
0°-40°	2033.8	41.7
0°-60°	3669.8	75.2
0°-90°	4883.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4883.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1584	1584	1584	1584	1584	
5°	1580	1580	1574	1580	1580	150
15°	1519	1521	1523	1537	1537	428
25°	1398	1406	1419	1443	1447	645
35°	1229	1243	1272	1304	1314	769
45°	1018	1038	1090	1143	1163	784
55°	771	803	889	973	1004	686
65°	495	552	681	781	816	489
75°	215	313	454	538	550	231
85°	41	90	110	123	125	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1584.3	1584.3	1584.3	1584.3	1584.3
2.5°	1586.3	1584.3	1576.1	1584.3	1584.3
5°	1580.2	1580.2	1574.1	1580.2	1580.2
7.5°	1570.0	1570.0	1565.9	1574.1	1574.1
10°	1557.7	1557.7	1555.7	1565.9	1565.9
12.5°	1539.3	1541.4	1539.3	1551.6	1551.6
15°	1518.9	1520.9	1523.0	1537.3	1537.3
17.5°	1492.3	1496.4	1500.5	1516.8	1518.9
20°	1467.8	1469.8	1478.0	1496.4	1498.4
22.5°	1435.1	1441.2	1451.4	1469.8	1475.9
25°	1398.3	1406.4	1418.7	1443.2	1447.3
27.5°	1363.5	1369.6	1386.0	1412.6	1420.8
30°	1320.6	1330.8	1351.2	1377.8	1388.0
32.5°	1279.7	1289.9	1314.5	1343.1	1351.2
35°	1228.6	1242.9	1271.5	1304.2	1314.5
37.5°	1179.5	1193.8	1228.6	1265.4	1277.7
40°	1128.4	1144.8	1181.6	1224.5	1240.9
42.5°	1073.2	1095.7	1136.6	1183.6	1202.0
45°	1018.0	1038.5	1089.6	1142.7	1163.2
47.5°	958.8	983.3	1038.5	1101.9	1126.4
50°	895.4	926.0	989.4	1058.9	1085.5
52.5°	832.0	866.8	938.3	1016.0	1044.6
55°	770.7	803.4	889.2	973.1	1003.7
57.5°	703.2	744.1	838.1	928.1	958.8
60°	633.7	678.7	787.0	881.1	913.8
62.5°	564.2	615.3	738.0	832.0	866.8
65°	494.7	551.9	680.7	780.9	815.7
67.5°	427.2	490.6	627.6	727.8	762.5
70°	349.6	429.3	570.3	668.5	703.2
72.5°	278.0	370.0	515.2	607.1	637.8
75°	214.6	312.8	453.8	537.6	549.9
77.5°	157.4	255.5	390.5	419.1	421.1
80°	106.3	204.4	298.5	294.4	298.5
82.5°	69.5	153.3	188.1	210.6	212.6
85°	40.9	89.9	110.4	122.7	124.7
87.5°	20.4	30.7	38.8	40.9	45.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)