Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P188257

Luminaire Tested: **MPBL-4-LD4-UNV-1STD-1STD-40**

Issue Date: 3/3/2020

Report Generated By E9911574 / USPTCWHP6081592

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Peachtree City, GA 30269

Test Information

Test Method:	LM-79-08
Report Number:	P188257
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27379)
Test Lab:	INNOVATION CENTER-P2
Issue Date:	3/3/2020
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	FAIL-SAFE
Catalog Number:	MPBL-4-LD4-UNV-1STD-1STD-40
Description:	
Light Source:	(168) NICHIA ELM 4000K LED
	2UT217042A8404A
Ballast/Driver:	ELECTRONIC DRIVER

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	6893.0 lumens
Efficiency:	N/A
Efficacy:	98.3 lumens/watt
Spacing Criteria (0/90/45):	1.28 / 1.19 / 1.37
Luminous Opening:	Rectangular w/ Sides (W: 4' x L: 0.42' x H: 0.29')
CIE Type:	General Diffuse

Input Watts (W):	70.1
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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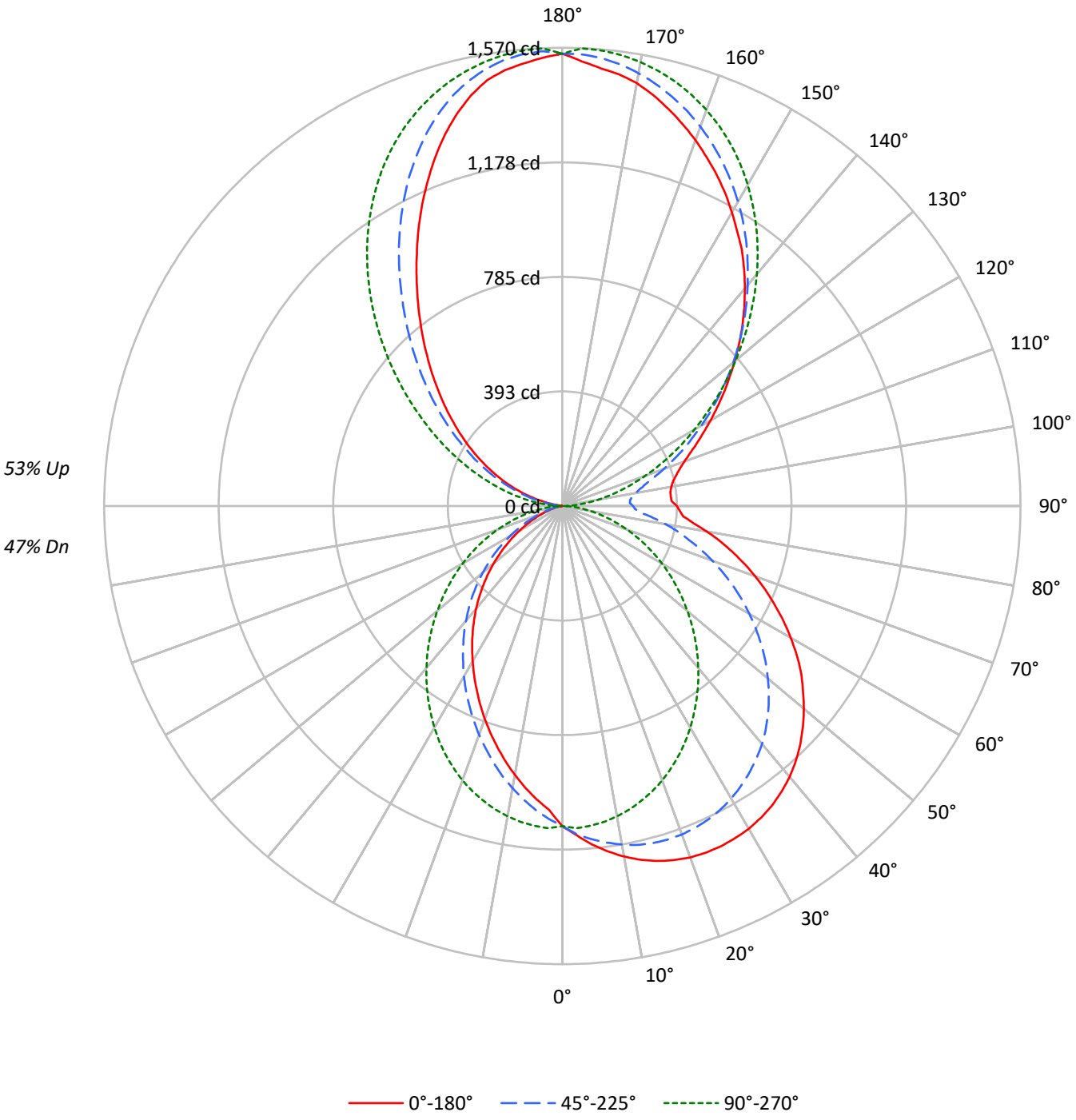
Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	106	106	106	106	98	98	98	98	81	81	81	67	67	67	53	53	53	47
1	96	92	88	84	88	84	81	77	70	68	65	58	56	54	46	44	43	38
2	87	80	73	68	80	73	68	63	61	57	54	50	47	45	40	38	36	31
3	80	70	62	56	73	64	58	52	54	49	45	44	41	37	35	33	30	26
4	73	62	54	47	66	57	50	44	48	42	38	39	35	32	31	28	26	22
5	67	55	47	41	61	51	43	38	43	37	33	35	31	28	28	25	23	19
6	61	49	41	35	56	45	38	33	38	33	28	32	27	24	25	22	20	17
7	57	44	36	31	52	41	34	29	35	29	25	29	24	21	23	20	18	15
8	53	40	32	27	48	37	30	25	32	26	22	26	22	19	21	18	16	13
9	49	37	29	24	45	34	27	23	29	23	20	24	20	17	20	16	14	12
10	46	34	26	21	42	31	25	20	27	21	18	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	7083	7083	7083
5°	7111	7086	6163
10°	7121	6989	5463
15°	7089	6858	4825
20°	7019	6700	4254
25°	6910	6500	3731
30°	6784	6274	3261
35°	6628	6022	2836
40°	6435	5752	2442
45°	6196	5472	2055
50°	5918	5167	1686
55°	5625	4855	1331
60°	5277	4519	992
65°	4910	4144	677
70°	4539	3706	419
75°	4151	3172	227
80°	3754	2505	92
85°	3426	1657	7

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.7	1.5
10°-20°	296.1	4.3
20°-30°	444.9	6.5
30°-40°	531.6	7.7
40°-50°	547.4	7.9
50°-60°	493.4	7.2
60°-70°	386.0	5.6
70°-80°	257.9	3.7
80°-90°	150.3	2.2
90°-100°	135.6	2.0
100°-110°	233.6	3.4
110°-120°	377.8	5.5
120°-130°	520.0	7.5
130°-140°	623.7	9.0
140°-150°	653.8	9.5
150°-160°	584.2	8.5
160°-170°	407.0	5.9
170°-180°	145.9	2.1
0°-30°	844.7	12.3
0°-40°	1376.3	20.0
0°-60°	2417.1	35.1
0°-90°	3211.3	46.6
90°-120°	747.0	10.8
90°-150°	2544.5	36.9
90°-180°	3682.0	53.4
0°-180°	6893.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1097	1097	1097	1097	1097	
5°	1164	1146	1100	1046	1009	113
15°	1259	1196	1046	910	857	357
25°	1286	1184	943	754	694	594
35°	1253	1116	803	592	536	784
45°	1153	997	643	435	382	890
55°	999	833	476	282	236	892
65°	804	644	314	142	111	797
75°	601	449	162	42	33	636
85°	416	271	41	3	1	360
90°	392	242	2	3	5	214
95°	373	233	53	0	0	306
105°	403	298	207	121	96	429
115°	508	456	408	282	249	506
125°	675	654	644	478	424	605
135°	872	876	906	708	626	673
145°	1072	1099	1160	973	864	669
155°	1252	1300	1367	1243	1138	576
165°	1408	1452	1504	1455	1392	397
175°	1506	1541	1566	1554	1522	143
180°	1550	1550	1550	1550	1550	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7
2.5°	1129.5	1125.4	1127.1	1129.5	1128.7	1127.1	1126.3	1127.1	1131.2	1128.7	1125.4
5°	1164.0	1161.5	1161.5	1160.7	1158.3	1155.8	1153.3	1153.3	1155.0	1151.7	1146.0
7.5°	1193.6	1191.1	1190.3	1188.6	1183.7	1182.9	1179.6	1176.3	1177.1	1171.4	1163.2
10°	1219.8	1215.7	1214.1	1211.6	1206.7	1203.4	1200.1	1196.8	1195.2	1187.8	1178.0
12.5°	1242.0	1238.7	1236.2	1232.1	1226.4	1223.9	1219.8	1213.3	1210.0	1201.0	1189.5
15°	1259.2	1256.0	1254.3	1251.0	1244.5	1241.2	1235.4	1227.2	1220.7	1210.0	1196.0
17.5°	1272.4	1269.9	1267.4	1263.3	1256.8	1251.8	1246.1	1236.2	1227.2	1215.7	1198.5
20°	1281.4	1279.8	1275.7	1269.9	1262.5	1257.6	1251.0	1239.5	1229.7	1216.5	1197.7
22.5°	1285.5	1283.9	1280.6	1274.0	1265.0	1259.2	1252.7	1238.7	1227.2	1213.3	1192.7
25°	1286.3	1284.7	1280.6	1274.0	1265.0	1259.2	1252.7	1237.1	1222.3	1207.5	1184.5
27.5°	1283.0	1281.4	1277.3	1270.7	1260.9	1254.3	1247.7	1230.5	1214.9	1198.5	1173.0
30°	1277.3	1274.8	1270.7	1263.3	1252.7	1246.1	1237.9	1219.8	1201.8	1183.7	1157.4
32.5°	1266.6	1265.0	1260.1	1252.7	1240.4	1233.8	1224.8	1205.9	1186.2	1165.7	1138.6
35°	1252.7	1250.2	1245.3	1237.9	1224.8	1217.4	1208.3	1187.8	1165.7	1145.1	1116.4
37.5°	1233.8	1233.0	1226.4	1219.0	1205.1	1197.7	1188.6	1167.3	1144.3	1120.5	1091.8
40°	1211.6	1209.2	1203.4	1195.2	1181.3	1173.9	1164.0	1141.8	1117.2	1093.4	1064.7
42.5°	1184.5	1182.1	1176.3	1168.1	1153.3	1145.1	1135.3	1113.1	1089.3	1062.2	1032.7
45°	1153.3	1151.7	1146.0	1136.9	1122.1	1113.1	1104.1	1081.1	1056.5	1028.6	997.4
47.5°	1118.0	1117.2	1110.7	1101.6	1087.7	1077.8	1068.8	1044.2	1021.2	992.4	959.6
50°	1080.3	1078.6	1072.9	1063.0	1048.3	1039.2	1030.2	1005.6	982.6	953.0	919.4
52.5°	1039.2	1038.4	1032.7	1022.0	1008.0	1000.7	989.2	964.5	941.6	911.2	877.5
55°	999.0	994.1	990.0	978.5	964.5	956.3	945.7	918.6	898.9	867.7	833.2
57.5°	953.0	947.3	942.4	931.7	917.7	910.4	898.0	874.2	851.3	821.7	787.2
60°	903.8	899.7	894.8	883.3	869.3	861.9	850.4	825.8	803.6	774.1	740.4
62.5°	854.5	849.6	845.5	834.0	820.1	812.7	801.2	777.4	755.2	725.7	692.8
65°	803.6	798.7	794.6	783.9	769.2	762.6	751.1	725.7	706.0	676.4	644.4
67.5°	753.6	748.6	744.5	733.0	718.3	712.5	701.0	678.0	656.7	626.3	595.1
70°	702.7	697.8	693.6	683.0	668.2	661.6	650.1	626.3	605.0	577.1	545.9
72.5°	651.8	646.9	641.9	631.3	617.3	611.6	600.1	577.9	557.4	527.8	498.3
75°	600.9	596.0	591.9	581.2	567.2	560.7	550.0	528.6	508.1	479.4	449.0
77.5°	551.6	545.9	541.8	531.9	518.0	511.4	500.7	481.9	459.7	432.6	405.5
80°	501.6	497.5	495.0	482.7	468.7	463.0	452.3	433.4	412.1	385.8	359.5
82.5°	453.9	449.0	445.7	435.1	421.1	415.4	404.7	386.6	365.3	342.3	314.4
85°	416.2	414.5	407.2	396.5	382.5	374.3	364.5	343.9	321.8	298.0	270.9
87.5°	403.1	401.4	394.8	384.2	369.4	361.2	351.3	330.8	306.2	279.1	249.5
90°	392.4	389.9	384.2	373.5	359.5	350.5	341.5	320.1	297.2	270.9	242.2
92.5°	375.1	373.5	367.8	357.9	343.9	335.7	326.7	306.2	283.2	258.6	231.5
95°	372.7	370.2	364.5	354.6	341.5	333.3	324.2	305.4	283.2	258.6	233.1
97.5°	373.5	371.9	366.1	356.3	343.1	335.7	327.5	308.7	288.1	264.3	241.3
100°	379.2	376.8	371.0	362.8	350.5	342.3	334.9	316.9	297.2	275.0	254.5
102.5°	388.3	386.6	380.9	373.5	361.2	353.8	347.2	330.0	311.9	290.6	273.4
105°	403.1	400.6	395.7	388.3	376.8	370.2	364.5	348.1	332.5	313.6	298.0
107.5°	421.1	417.8	414.5	408.0	397.3	390.7	385.8	371.9	356.3	342.3	331.6
110°	444.1	442.5	437.5	432.6	422.8	417.0	413.7	401.4	390.7	377.6	369.4

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	473.6	470.4	467.1	463.0	454.8	449.8	446.6	436.7	427.7	416.2	410.4
115°	508.1	508.1	503.2	498.3	490.9	486.8	484.3	475.3	467.9	458.9	455.6
117.5°	545.1	541.0	540.1	536.0	529.5	526.2	524.5	517.2	511.4	504.0	499.9
120°	586.1	582.0	581.2	577.1	571.3	568.9	569.7	561.5	557.4	551.6	549.2
122.5°	628.8	624.7	624.7	621.4	616.5	614.0	612.4	608.3	605.8	601.7	600.9
125°	674.8	669.8	669.8	667.4	662.5	660.8	660.8	657.5	656.7	654.2	654.2
127.5°	720.7	715.8	716.6	714.2	710.9	709.2	710.1	708.4	709.2	707.6	708.4
130°	770.0	765.1	765.9	764.2	761.8	761.0	762.6	761.8	763.4	762.6	764.2
132.5°	820.9	816.0	816.8	815.1	813.5	812.7	815.1	815.1	817.6	817.6	820.1
135°	871.8	866.0	867.7	866.9	865.2	864.4	867.7	868.5	871.0	872.6	875.9
137.5°	922.7	916.9	917.7	917.7	916.9	916.9	920.2	921.0	925.1	927.6	932.5
140°	972.7	967.8	968.6	968.6	968.6	968.6	972.7	974.4	978.5	981.0	987.5
142.5°	1022.8	1017.9	1018.7	1018.7	1019.5	1020.4	1024.5	1026.9	1031.0	1035.1	1043.3
145°	1072.1	1066.3	1067.1	1068.0	1069.6	1070.4	1074.5	1078.6	1083.6	1086.0	1099.2
147.5°	1114.8	1113.9	1115.6	1116.4	1118.9	1119.7	1125.4	1129.5	1136.1	1139.4	1153.3
150°	1161.5	1160.7	1162.4	1164.0	1166.5	1168.9	1174.7	1178.8	1185.4	1191.9	1204.2
152.5°	1208.3	1207.5	1208.3	1209.2	1211.6	1213.3	1219.8	1224.8	1231.3	1237.1	1252.7
155°	1251.8	1251.8	1252.7	1254.3	1256.8	1259.2	1265.8	1270.7	1277.3	1283.9	1299.5
157.5°	1292.9	1292.9	1295.4	1297.8	1301.1	1303.6	1310.1	1315.1	1321.6	1328.2	1343.0
160°	1333.9	1333.9	1336.4	1338.9	1342.1	1344.6	1350.4	1356.1	1362.7	1368.4	1383.2
162.5°	1371.7	1370.9	1374.2	1374.2	1377.4	1380.7	1386.5	1392.2	1398.8	1406.2	1420.1
165°	1407.8	1407.0	1410.3	1409.5	1412.7	1416.0	1421.8	1427.5	1434.1	1441.5	1452.1
167.5°	1441.5	1439.8	1442.3	1443.1	1445.6	1448.9	1453.8	1459.5	1464.5	1471.0	1480.9
170°	1471.0	1471.0	1471.8	1471.0	1473.5	1475.9	1480.9	1486.6	1490.7	1498.1	1505.5
172.5°	1491.5	1489.9	1491.5	1493.2	1495.6	1498.9	1503.9	1509.6	1513.7	1520.3	1526.0
175°	1505.5	1505.5	1508.8	1512.1	1514.5	1517.8	1522.7	1528.5	1531.8	1537.5	1540.8
177.5°	*1525.2*	*1523.6*	*1524.4*	*1526.0*	*1527.7*	*1530.9*	*1535.1*	*1540.8*	*1542.4*	*1549.0*	*1549.0*
180°	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8

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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7
2.5°	1120.5	1111.5	1108.2	1107.4	1108.2	1109.0	1109.0	1109.0	1109.0	1104.9	1097.5
5°	1138.6	1127.9	1121.3	1118.0	1116.4	1116.4	1113.1	1110.7	1107.4	1100.0	1090.1
7.5°	1153.3	1140.2	1130.4	1124.6	1122.1	1119.7	1113.9	1108.2	1101.6	1091.8	1077.8
10°	1164.8	1149.2	1136.9	1127.9	1123.8	1119.7	1110.7	1102.4	1092.6	1079.5	1063.0
12.5°	1173.0	1155.0	1139.4	1127.1	1122.1	1116.4	1104.9	1093.4	1080.3	1064.7	1045.8
15°	1177.1	1156.6	1138.6	1123.0	1115.6	1109.0	1094.2	1080.3	1063.9	1045.8	1023.6
17.5°	1178.0	1155.0	1132.8	1114.8	1106.5	1099.2	1081.1	1063.9	1045.0	1024.5	999.0
20°	1175.5	1150.1	1125.4	1104.1	1095.1	1085.2	1064.7	1045.0	1022.8	1000.7	973.6
22.5°	1168.9	1140.2	1113.1	1089.3	1078.6	1068.0	1044.2	1022.0	997.4	972.7	944.0
25°	1159.1	1127.9	1098.3	1071.3	1059.8	1047.4	1022.0	996.6	971.1	943.2	912.0
27.5°	1145.1	1112.3	1080.3	1050.7	1037.6	1023.6	995.7	968.6	941.6	911.2	878.3
30°	1127.1	1094.2	1058.9	1026.9	1012.1	997.4	967.0	937.4	908.7	876.7	843.0
32.5°	1107.4	1072.1	1035.1	1000.7	985.1	969.5	935.8	904.6	874.2	839.8	805.3
35°	1084.4	1047.4	1008.9	972.7	954.7	939.1	903.0	870.1	836.5	802.8	767.5
37.5°	1058.9	1020.4	980.1	942.4	923.5	906.3	869.3	834.0	799.5	764.2	728.9
40°	1029.4	990.8	948.9	908.7	889.0	871.0	832.4	796.3	760.1	724.0	688.7
42.5°	996.6	958.0	915.3	874.2	853.7	834.0	794.6	756.9	719.9	683.8	647.7
45°	962.1	921.9	879.2	838.1	816.0	797.1	756.0	717.5	679.7	642.8	607.5
47.5°	924.3	884.1	841.4	797.1	776.6	757.7	715.0	676.4	637.8	600.9	564.8
50°	884.1	844.7	801.2	759.3	735.5	715.8	673.9	635.4	596.0	559.0	525.4
52.5°	841.4	801.2	760.1	716.6	696.9	674.8	633.7	591.9	554.1	517.2	485.1
55°	797.9	757.7	715.0	672.3	653.4	632.1	588.6	550.0	512.2	476.1	442.5
57.5°	751.9	711.7	671.5	629.6	609.1	587.8	547.5	508.9	469.5	435.1	404.7
60°	706.0	665.7	625.5	585.3	564.8	544.2	504.0	466.3	427.7	394.0	364.5
62.5°	658.3	619.8	580.4	539.3	519.6	499.9	461.3	423.6	386.6	353.8	325.1
65°	610.7	573.0	531.9	494.2	475.3	455.6	416.2	380.1	345.6	313.6	285.7
67.5°	562.3	526.2	488.4	449.0	430.1	412.1	375.1	339.0	305.4	274.2	247.1
70°	514.7	479.4	443.3	403.9	385.8	367.8	333.3	298.0	267.6	235.6	210.1
72.5°	466.3	433.4	398.1	359.5	342.3	324.2	292.2	258.6	228.2	197.8	173.2
75°	419.5	385.0	351.3	316.0	298.8	282.4	249.5	217.5	190.4	161.7	137.9
77.5°	372.7	342.3	309.5	273.4	256.9	240.5	211.8	180.6	153.5	126.4	105.9
80°	327.5	297.2	266.8	232.3	216.7	201.1	173.2	144.5	119.8	95.2	76.3
82.5°	284.8	255.3	225.7	194.5	178.1	163.4	137.9	112.5	88.7	66.5	49.3
85°	242.2	213.4	187.2	157.6	142.8	128.9	103.4	81.3	60.7	41.0	26.3
87.5°	218.4	185.5	155.1	125.6	110.8	96.9	75.5	55.0	35.3	18.9	5.7
90°	211.8	181.4	151.0	120.7	105.9	91.9	64.0	38.6	16.4	2.5	0.0
92.5°	203.6	174.8	146.9	119.8	107.5	94.4	69.8	46.8	31.2	23.0	14.8
95°	206.9	180.6	155.1	130.5	119.0	108.4	86.2	70.6	61.6	53.4	46.0
97.5°	216.7	192.9	169.9	146.9	137.1	128.9	114.1	102.6	96.9	87.0	80.4
100°	231.5	211.0	190.4	172.4	166.6	160.9	147.8	139.6	133.0	123.1	114.9
102.5°	252.0	235.6	220.8	206.0	201.9	197.0	186.3	179.0	173.2	163.4	154.3
105°	282.4	269.2	256.9	243.8	241.3	237.2	229.8	222.5	218.4	206.9	197.0
107.5°	317.7	307.0	294.7	285.7	284.8	279.9	275.0	268.4	264.3	252.8	244.6
110°	355.4	348.1	337.4	331.6	330.0	327.5	322.6	316.9	314.4	302.1	290.6

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
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Scaled Data Report

TEST NUMBER: P188257
CATALOG NUMBER: MPBL-4-LD4-UNV-1STD-1STD-40

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
112.5°	399.8	393.2	386.6	380.1	379.2	376.8	372.7	367.8	*365.3*	353.8	344.8
115°	445.7	443.3	435.9	433.4	428.5	428.5	425.2	421.1	*418.7*	408.0	398.1
117.5°	494.2	493.4	485.1	483.5	481.0	481.0	478.6	478.6	*474.5*	463.8	454.8
120°	545.1	543.4	538.5	537.7	536.0	536.9	536.9	536.9	*532.8*	521.3	513.1
122.5°	597.6	600.1	594.3	596.8	592.7	594.3	595.1	593.5	*592.7*	582.0	573.8
125°	651.8	655.9	650.1	651.0	651.0	652.6	655.1	658.3	*655.1*	644.4	637.0
127.5°	706.8	711.7	706.8	709.2	708.4	711.7	716.6	719.9	*719.1*	708.4	701.9
130°	763.4	770.0	765.1	768.3	768.3	772.5	779.0	783.9	*784.8*	774.9	767.5
132.5°	819.2	827.4	824.2	826.6	828.3	834.0	841.4	848.0	*843.9*	840.6	830.7
135°	880.8	885.7	882.4	886.6	889.0	896.4	903.0	912.0	*912.0*	906.3	897.2
137.5°	936.6	942.4	942.4	945.7	949.8	958.0	965.4	974.4	*977.7*	972.7	964.5
140°	992.4	997.4	998.2	1003.9	1009.7	1018.7	1029.4	1036.8	*1040.9*	1036.8	1029.4
142.5°	1047.4	1053.2	1051.6	1062.2	1068.8	1077.0	1085.2	1096.7	*1099.2*	1099.2	1092.6
145°	1103.3	1108.2	1109.8	1119.7	1126.3	1135.3	1146.0	1155.8	*1159.1*	1159.9	1154.2
147.5°	1155.0	1160.7	1163.2	1173.9	1180.4	1190.3	1200.1	1211.6	*1215.7*	1216.5	1212.4
150°	1204.2	1211.6	1214.9	1227.2	1233.8	1242.8	1252.7	1264.2	*1269.1*	1270.7	1267.4
152.5°	1251.8	1260.1	1264.2	1277.3	1283.9	1292.9	1301.9	1313.4	*1319.2*	1320.8	1318.3
155°	1296.2	1305.2	1309.3	1323.3	1329.8	1338.0	1347.1	1358.6	*1364.3*	1366.8	1365.1
157.5°	1338.0	1347.1	1351.2	1365.9	1371.7	1379.1	1388.1	1399.6	*1405.4*	1407.8	1407.0
160°	1376.6	1384.0	1390.6	1404.5	1411.1	1416.8	1425.1	1436.5	*1442.3*	1443.9	1444.8
162.5°	1413.6	1420.1	1425.9	1438.2	1443.9	1448.9	1457.1	1467.7	*1473.5*	1475.9	1475.9
165°	1445.6	1453.0	1457.1	1469.4	1475.1	1479.2	1486.6	1497.3	*1503.0*	1503.9	1504.7
167.5°	1474.3	1479.2	1484.2	1495.6	1500.6	1504.7	1510.4	1519.5	*1525.2*	1526.0	1526.8
170°	1498.1	1503.0	1507.1	1517.8	1521.9	1526.0	1529.3	1538.3	*1543.3*	1544.1	1544.9
172.5°	1517.8	1521.9	1525.2	1535.1	1538.3	1541.6	1544.9	1552.3	*1557.2*	1558.0	1558.0
175°	1532.6	1535.1	1538.3	1546.5	1550.6	1552.3	1555.6	1562.1	*1566.2*	1566.2	1567.1
177.5°	*1541.6*	*1543.3*	*1545.7*	*1553.1*	*1556.4*	*1557.2*	*1559.7*	*1566.2*	*1570.3*	*1569.5*	*1570.3*
180°	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	*1549.8*	1549.8	1549.8

Cooper Lighting Solutions Photometric Lab
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Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P188257
CATALOG NUMBER: MPBL-4-LD4-UNV-1STD-1STD-40

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7
2.5°	1090.1	1081.9	1078.6	1077.8	1077.8	1076.2	1072.9	1072.1	1072.9	1072.1	1068.0
5°	1078.6	1068.0	1061.4	1059.8	1058.9	1054.8	1049.1	1046.6	1045.8	1041.7	1036.0
7.5°	1065.5	1051.6	1042.5	1039.2	1037.6	1031.0	1022.8	1017.9	1014.6	1009.7	1002.3
10°	1047.4	1031.0	1020.4	1015.4	1013.0	1003.1	993.3	986.7	981.8	974.4	966.2
12.5°	1026.9	1008.0	994.9	989.2	985.1	973.6	962.1	953.9	948.1	939.1	930.1
15°	1003.1	981.8	966.2	958.8	955.5	942.4	928.4	919.4	910.4	901.3	891.5
17.5°	976.9	953.0	935.8	928.4	922.7	907.1	892.3	882.4	871.8	862.7	852.9
20°	948.1	922.7	903.0	895.6	888.2	871.8	855.4	845.5	834.0	825.8	813.5
22.5°	916.1	889.0	868.5	860.3	852.9	834.8	817.6	806.1	794.6	784.8	772.5
25°	882.4	854.5	833.2	823.3	815.1	797.1	778.2	766.7	754.4	744.5	732.2
27.5°	847.2	817.6	795.4	785.6	777.4	756.9	738.8	727.3	714.2	704.3	692.0
30°	810.2	779.8	756.9	747.0	738.0	717.5	699.4	687.9	673.9	664.1	652.6
32.5°	771.6	740.4	718.3	707.6	696.9	677.2	660.8	645.2	632.9	623.9	611.6
35°	733.0	701.0	677.2	667.4	657.5	637.0	620.6	605.8	591.9	582.0	571.3
37.5°	693.6	661.6	637.8	628.0	618.1	597.6	581.2	566.4	554.1	541.8	531.9
40°	653.4	622.2	600.1	588.6	577.9	557.4	541.8	526.2	513.9	501.6	492.5
42.5°	613.2	582.0	559.8	548.3	537.7	518.0	501.6	486.0	473.6	462.2	452.3
45°	572.2	541.8	518.8	508.9	498.3	478.6	460.5	446.6	435.1	423.6	413.7
47.5°	531.9	503.2	479.4	470.4	458.9	439.2	421.1	407.2	394.8	385.0	374.3
50°	491.7	463.8	440.0	429.3	419.5	399.8	381.7	367.8	356.3	345.6	336.6
52.5°	453.1	424.4	400.6	391.6	380.1	359.5	343.9	329.2	317.7	307.0	297.2
55°	411.3	385.8	362.0	353.0	341.5	321.8	306.2	291.4	281.6	269.2	261.0
57.5°	373.5	345.6	324.2	313.6	302.1	284.8	267.6	253.7	243.8	232.3	225.7
60°	334.1	307.0	284.0	275.8	264.3	247.1	229.8	217.5	208.5	197.8	191.3
62.5°	295.5	269.2	248.7	238.1	227.4	211.0	194.5	182.2	174.0	165.0	157.6
65°	256.1	233.1	211.8	201.1	191.3	174.0	160.9	149.4	142.0	133.0	128.1
67.5°	220.8	197.0	178.1	166.6	156.8	141.2	129.7	119.0	112.5	105.1	100.1
70°	183.1	161.7	143.7	133.0	124.0	110.8	100.1	91.1	85.4	80.4	74.7
72.5°	149.4	128.9	111.6	101.8	94.4	83.7	74.7	65.7	61.6	57.5	54.2
75°	114.9	98.5	82.9	74.7	68.1	59.1	51.7	44.3	41.9	39.4	37.8
77.5°	87.8	69.8	56.6	50.1	46.0	36.9	32.8	28.7	27.9	26.3	24.6
80°	59.9	45.1	34.5	28.7	26.3	21.3	19.7	17.2	16.4	15.6	14.8
82.5°	35.3	23.8	17.2	14.8	13.1	11.5	9.9	9.0	8.2	8.2	7.4
85°	14.0	9.0	6.6	5.7	4.9	4.9	4.1	3.3	3.3	2.5	2.5
87.5°	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	1.6
90°	0.0	0.8	0.8	1.6	1.6	2.5	2.5	3.3	3.3	3.3	3.3
92.5°	9.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	40.2	32.0	24.6	20.5	17.2	9.9	2.5	0.0	0.0	0.0	0.0
97.5°	73.1	64.0	55.8	52.5	49.3	42.7	33.7	26.3	19.7	15.6	10.7
100°	106.7	98.5	89.5	85.4	82.1	74.7	66.5	59.1	52.5	49.3	43.5
102.5°	144.5	135.4	125.6	121.5	117.4	109.2	100.1	92.8	85.4	82.9	77.2
105°	185.5	175.7	164.2	160.1	155.1	146.1	135.4	127.2	120.7	116.6	111.6
107.5°	230.7	220.0	206.9	199.5	195.4	186.3	174.0	164.2	156.8	151.0	147.8
110°	278.3	266.0	252.0	243.8	239.7	228.2	215.1	204.4	196.2	191.3	185.5

Cooper Lighting Solutions Photometric Lab
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Scaled Data Report

TEST NUMBER: P188257
CATALOG NUMBER: MPBL-4-LD4-UNV-1STD-1STD-40

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
112.5°	331.6	314.4	299.6	291.4	286.5	273.4	258.6	247.1	238.1	232.3	224.9
115°	385.0	369.4	349.7	341.5	335.7	320.1	304.5	291.4	281.6	274.2	269.2
117.5°	440.0	423.6	403.1	393.2	386.6	370.2	352.2	338.2	327.5	316.9	309.5
120°	499.1	481.0	458.9	448.2	440.8	423.6	403.1	387.5	374.3	366.1	358.7
122.5°	556.6	541.0	516.3	505.7	497.5	478.6	456.4	438.4	424.4	414.5	403.9
125°	618.9	602.5	576.3	564.8	556.6	535.2	511.4	492.5	477.8	466.3	453.1
127.5°	683.0	665.7	637.0	624.7	615.7	594.3	568.1	547.5	531.1	515.5	504.8
130°	749.5	731.4	701.0	687.1	677.2	655.9	629.6	606.6	588.6	574.6	559.0
132.5°	815.1	797.1	766.7	751.9	741.3	719.1	691.2	668.2	646.9	628.8	614.8
135°	881.6	862.7	833.2	818.4	806.1	783.1	754.4	730.6	708.4	691.2	675.6
137.5°	951.4	929.2	901.3	881.6	872.6	847.2	819.2	795.4	771.6	750.3	736.3
140°	1017.1	994.9	967.8	948.1	938.3	912.0	883.3	860.3	835.7	813.5	798.7
142.5°	1081.1	1059.8	1034.3	1015.4	1005.6	976.9	948.9	926.8	903.0	879.2	863.6
145°	1143.5	1123.0	1099.2	1081.1	1072.1	1042.5	1017.1	995.7	972.7	947.3	930.1
147.5°	1202.6	1184.5	1162.4	1145.1	1136.1	1106.5	1082.7	1063.9	1042.5	1017.1	999.0
150°	1259.2	1242.0	1222.3	1205.9	1198.5	1169.8	1146.8	1129.5	1110.7	1084.4	1066.3
152.5°	1311.8	1297.0	1278.9	1264.2	1257.6	1230.5	1210.0	1193.6	1178.0	1151.7	1133.6
155°	1359.4	1346.2	1331.5	1317.5	1311.8	1287.1	1268.3	1254.3	1242.8	1218.2	1200.1
157.5°	1402.9	1391.4	1378.3	1366.8	1361.0	1338.9	1322.4	1310.9	1302.7	1281.4	1265.8
160°	1440.6	1431.6	1420.9	1411.1	1407.0	1386.5	1373.3	1364.3	1360.2	1340.5	1325.7
162.5°	1473.5	1466.1	1456.2	1448.9	1445.6	1429.2	1417.7	1411.1	1410.3	1393.9	1379.1
165°	1502.2	1495.6	1488.3	1482.5	1479.2	1465.3	1457.1	1453.0	1454.6	1443.1	1428.3
167.5°	1525.2	1521.1	1513.7	1509.6	1507.1	1494.8	1488.3	1486.6	1490.7	1482.5	1470.2
170°	1543.3	1539.2	1533.4	1530.9	1529.3	1518.6	1513.7	1513.7	1519.5	1513.7	1502.2
172.5°	1557.2	1553.1	1549.0	1547.4	1544.9	1535.9	1532.6	1533.4	1540.8	1537.5	1527.7
175°	1565.4	1562.1	1558.0	1557.2	1554.8	1545.7	1544.1	1546.5	1553.9	1552.3	1544.1
177.5°	*1568.7*	*1565.4*	*1562.1*	*1560.5*	*1558.0*	*1550.6*	*1549.0*	*1551.5*	*1559.7*	*1558.9*	*1550.6*
180°	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8

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TEST NUMBER: P188257
CATALOG NUMBER: MPBL-4-LD4-UNV-1STD-1STD-40

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7	1096.7
2.5°	1064.7	1063.0	1059.8	1058.9	1056.5	1051.6	1046.6	1042.5
5°	1030.2	1027.7	1023.6	1023.6	1021.2	1017.1	1013.0	1008.9
7.5°	995.7	992.4	989.2	988.3	985.9	981.8	978.5	973.6
10°	958.8	954.7	951.4	949.8	947.3	943.2	939.9	935.8
12.5°	921.0	916.1	912.0	910.4	907.1	903.8	901.3	897.2
15°	882.4	877.5	874.2	871.8	868.5	863.6	860.3	857.0
17.5°	846.3	838.9	836.5	833.2	829.1	825.0	821.7	816.8
20°	806.1	798.7	797.1	792.2	788.0	783.9	779.8	776.6
22.5°	765.1	756.9	755.2	750.3	746.2	742.9	738.8	735.5
25°	724.0	716.6	714.2	710.1	705.1	701.9	697.8	694.5
27.5°	683.8	676.4	673.9	669.8	666.6	660.8	657.5	654.2
30°	644.4	636.2	634.5	629.6	626.3	620.6	615.7	614.0
32.5°	604.2	595.1	594.3	592.7	586.9	582.0	577.1	575.4
35°	563.9	555.7	554.9	551.6	547.5	542.6	538.5	536.0
37.5°	524.5	516.3	515.5	514.7	508.1	504.0	500.7	497.5
40°	485.1	477.8	476.9	473.6	469.5	465.4	462.2	459.7
42.5°	445.7	438.4	437.5	435.9	431.0	426.9	422.8	421.1
45°	407.2	399.8	398.9	397.3	391.6	388.3	385.0	382.5
47.5°	368.6	362.0	359.5	359.5	353.0	350.5	348.1	344.8
50°	329.2	323.4	321.8	321.0	316.0	311.1	310.3	307.8
52.5°	292.2	286.5	284.8	284.0	279.9	275.0	274.2	271.7
55°	255.3	250.4	248.7	248.7	244.6	240.5	238.9	236.4
57.5°	220.0	215.1	213.4	213.4	210.1	206.0	204.4	202.8
60°	186.3	181.4	179.8	179.8	176.5	173.2	172.4	169.9
62.5°	154.3	149.4	147.8	148.6	145.3	142.0	141.2	139.6
65°	124.0	119.8	118.2	118.2	115.7	114.1	112.5	110.8
67.5°	96.9	92.8	91.9	91.9	90.3	87.8	87.0	85.4
70°	72.2	69.0	68.1	69.0	68.1	66.5	65.7	64.8
72.5°	52.5	50.9	50.9	50.1	50.1	49.3	48.4	47.6
75°	36.1	35.3	36.1	35.3	35.3	33.7	33.7	32.8
77.5°	24.6	23.8	23.0	23.0	22.2	22.2	21.3	22.2
80°	14.0	14.0	13.1	13.1	12.3	12.3	12.3	12.3
82.5°	6.6	6.6	6.6	5.7	5.7	5.7	4.9	5.7
85°	1.6	1.6	1.6	1.6	0.8	0.8	0.8	0.8
87.5°	2.5	2.5	2.5	3.3	3.3	3.3	3.3	3.3
90°	3.3	3.3	3.3	3.3	4.1	4.1	4.1	4.9
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	6.6	4.9	4.1	4.1	3.3	1.6	1.6	0.8
100°	36.9	32.8	32.0	31.2	29.6	26.3	24.6	23.0
102.5°	72.2	69.0	68.1	66.5	66.5	63.2	60.7	59.1
105°	106.7	105.1	103.4	103.4	101.8	98.5	98.5	96.0
107.5°	142.8	141.2	139.6	139.6	136.3	135.4	135.4	132.2
110°	179.8	179.0	177.3	176.5	175.7	173.2	173.2	169.9

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report

TEST NUMBER: P188257
CATALOG NUMBER: MPBL-4-LD4-UNV-1STD-1STD-40

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
112.5°	219.2	218.4	216.7	215.9	215.1	211.8	211.8	209.3
115°	261.9	258.6	257.8	256.1	255.3	252.0	252.0	248.7
117.5°	303.7	300.4	297.2	298.0	296.3	293.1	293.9	290.6
120°	348.9	343.9	343.1	341.5	339.8	336.6	336.6	333.3
122.5°	395.7	389.9	385.8	386.6	384.2	380.9	380.9	377.6
125°	444.1	437.5	432.6	433.4	431.0	426.9	427.7	423.6
127.5°	494.2	486.0	481.0	481.9	478.6	473.6	474.5	470.4
130°	547.5	537.7	532.8	532.8	528.6	524.5	523.7	520.4
132.5°	605.0	591.9	585.3	584.5	577.9	575.4	575.4	571.3
135°	661.6	647.7	640.3	639.5	634.5	628.8	628.8	625.5
137.5°	721.6	706.8	698.6	696.9	690.4	684.6	685.4	681.3
140°	783.1	767.5	758.5	756.9	749.5	742.9	743.7	739.6
142.5°	846.3	830.7	820.9	819.2	811.0	804.5	804.5	800.4
145°	912.8	893.1	885.7	884.1	875.9	867.7	868.5	863.6
147.5°	984.2	960.4	953.9	951.4	941.6	933.3	934.2	929.2
150°	1052.4	1029.4	1021.2	1018.7	1008.9	1000.7	1003.1	997.4
152.5°	1119.7	1097.5	1089.3	1087.7	1077.8	1070.4	1068.8	1067.1
155°	1188.6	1166.5	1159.1	1156.6	1146.8	1140.2	1141.0	1137.7
157.5°	1255.1	1234.6	1226.4	1224.8	1214.9	1211.6	1210.0	1205.1
160°	1316.7	1297.8	1292.1	1289.6	1280.6	1277.3	1275.7	1272.4
162.5°	1371.7	1354.5	1348.7	1346.2	1339.7	1338.0	1337.2	1335.6
165°	1421.8	1407.0	1402.9	1400.4	1394.7	1393.9	1393.9	1392.2
167.5°	1465.3	1453.0	1449.7	1448.0	1443.1	1443.1	1443.1	1442.3
170°	1498.9	1489.1	1486.6	1485.0	1481.7	1482.5	1481.7	1481.7
172.5°	1525.2	1516.2	1512.9	1511.2	1508.0	1507.1	1506.3	1506.3
175°	1541.6	1534.2	1531.8	1529.3	1526.0	1524.4	1521.1	1521.9
177.5°	*1549.0*	*1542.4*	*1540.8*	*1537.5*	*1536.7*	*1536.7*	*1535.9*	*1537.5*
180°	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8	1549.8

(END OF REPORT)